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FARM AND FIRESIDE

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JANUARY 10
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And Other Flower Collections

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These specially selected named varieties frequently sell for 50 cents each.

1. **Nephrolepis Exaltata Bostoniensis**—The popular Boston Sword Fern.
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1. **Black Hawk**—Dark velvety-crimson. Extremely fine grown in sprays.
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5. **Percy Plumridge**—A very large Japanese incurved variety; of buttercup-yellow.
6. **W. F. McNeice**—Lavender-pearl, shading to a rich glowing pink at the center.

Special—With every subscription sent to FARM AND FIRESIDE in connection with any offer on this page before January 31st, we will furnish without cost a copy of Balfour Ker's beautiful painting, "Her Mother's Voice," described on page 21.

Notice—If any person, whose subscription you obtain, wants flower collections also, add 15 cents to the price of FARM AND FIRESIDE for each flower collection wanted.

Send All Orders to FARM AND FIRESIDE, Springfield, Ohio



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The Agriculture of Three Ancient Nations

By Prof. F. H. King

This is the introductory article of a notable series. The American farmer is beginning to realize that the soil is a thing that must be handled with care if it is to produce a living for his grand-children. The best place to study this coming problem—the maintenance of fertility—is in those ancient over-populated nations of Asia, which are behind us in so many things, but centuries ahead of us in the practice of intensive agriculture. No man has better scientific and practical equipment for that study than Prof. F. H. King. He presents to Farm and Fireside readers the fruits of his first-hand observations on the tiny, wonderful farms of the Orient.—EDITOR.

WE HAD long had the desire to see some of the methods, appliances and practices which centuries of stress and experience had led farmers of three of the oldest nations of the world to adopt, and January 28th, last, we left Madison for China, Korea and Japan. We wanted to learn by seeing how it is to-day possible after twenty, thirty and perhaps forty centuries for its farmers to provide means of maintenance for such dense populations as now are living in these three countries. We began seeing, in the fields between Yokohama and Tokio in Japan, February 20th, during the two days our steamer stopped en route for Shanghai and Hong-Kong, China.

From this time until late in July our whole time was spent, as nearly as possible, in the study of field conditions. We traveled with an interpreter by boat along the canals and rivers and by rail where possible, stopping at stations and often walking through the fields to the next station and directly back into the country, talking with farmers on the way. In the Shantung province we surprised the old farmer standing at the plow in the illustration by asking the privilege of holding it one round in his little field, but this he freely granted. My furrow was not as well turned as his, nor as good as I could have turned with a two-handled Oliver or John Deere, but it was better than the old man had expected, and won for me his respect. The plow had a good steel point, a separate piece shaped like a blunt letter V and the mold-board is cast steel, with a true twist that turns the soil well. The standard and sole are wood. At the end of the beam is a block which gages the depth of the plow in the soil. For the outfit he paid two dollars and fifteen cents in gold. When the task is done for the day he carries the plow home on his shoulder a distance of over a mile. All tools in this country, inexpensive though they are, from our standpoint, are sheltered and scrupulously cared for.

We were most of all interested in methods of tillage, of fertilization and crop rotation, and began our detailed study in south China, progressing gradually northward to Mukden in south Manchuria. This gave a much longer period for observing these operations and a better opportunity to come in contact with different phases, as practised in different provinces with different crops and under different climates. From Mukden we passed south through Korea and then across to Japan. In Japan we were extremely fortunate in having Prof. K. Tokito, of the Agricultural College of Sapporo, as companion and escort. I had written to Prof. S. Sato, head of the Agricultural College of the Tohoku Imperial University, to secure the services of an agricultural student to travel with me as interpreter and was much surprised when I was informed that the university, with the Bureau of Agriculture, of the Department of Commerce and Agriculture, had arranged for Professor Tokito to meet me at Nagasaki and travel with me, with his expenses paid. This gave me the companionship of a trained Japanese agriculturist with whom I could converse freely and who was of the greatest service to my mission.

Japan is making rapid strides along many industrial lines and great attention has for years been paid to her agriculture, in which rapid progress is being made. As early as 1872 she had established an agricultural col-

lege. For several years the soil survey of the main islands has been completed with large scale maps and is made the basis of values for national, prefectural and local land taxes. She has an admirable system of road maintenance in effective operation. She has many agricultural experiment stations, nine of which we visited, and the equipment at Tokio for soil investigation is superior to anything yet provided in this country. We have more pretentious buildings, but their resources are more largely used in providing appliances and men for rigid, accurate research work. I visited one of their dormitories at the agricultural college connected with the Fukuoka Experiment Station, and here young men are provided with room and board at four dollars (gold) per month. From the two colleges of highest rank had graduated, in 1907, 1,041 students; from

According to official statistics published in 1908 Japan has in its main islands, exclusive of Formosa and Karafuto, a population of 48,542,736, and the area of its cultivated fields is 21,321 square miles. This is 2,277 people to the square mile, and besides these there are also maintained 2,600,000 cattle and horses, nearly all of which are laboring animals, giving a population of 142 people and 7 horses and cattle to each forty acres of cultivated field; a condition sufficiently different from our most fully occupied forty-acre farm.

In the United States, omitting Alaska and Hawaii, the population in 1900 was 76,085,794 and the area of improved farm land was 647,591 square miles, giving us 117 people as compared with Japan's 2,277 to the square mile of cultivated land. Japan's density of population is thus nineteen times that in this country.

We were feeding in 1903 not quite thirty horses and mules to the square mile of cultivated field; Japan had more nearly sixty-nine, and so more than double the number of laboring animals of horse kind. We were feeding, but for the purpose of converting hay and grain into meat and milk—another form of food—about ninety-five cattle to the square mile of cultivated field; Japan is feeding, but largely as laboring animals, nearly fifty-six cattle to the square mile of her cultivated land.

Again, as food transformers and for clothing, we were feeding in 1900 nearly ninety-nine sheep and rather more than seventy-two swine to the square mile of improved farm land. Japan is feeding, as food transformers, in the form of goats, swine and sheep but thirteen to the square mile to her cultivated land. Here again are profound differences in farm practice and conditions between the two nations.

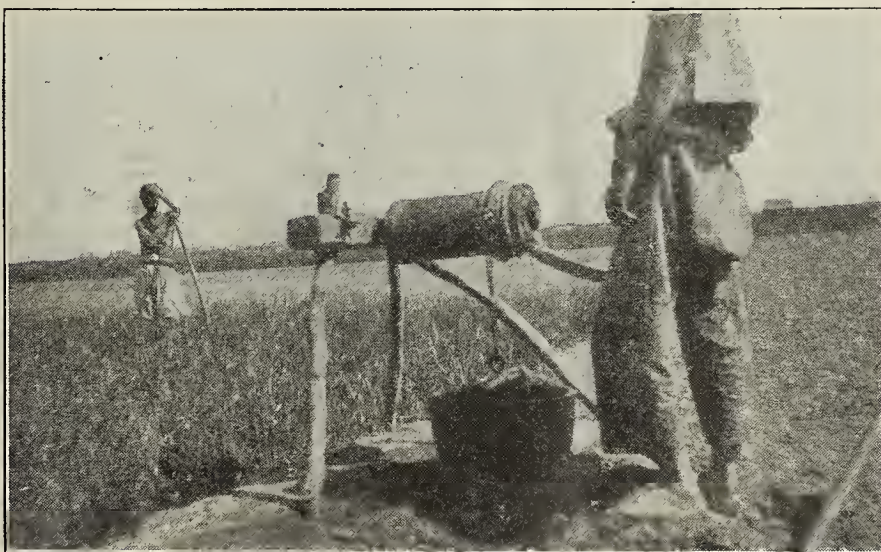
We cannot give such general and exact figures regarding the feeding capacity of Chinese farms and farmers, but the old farmer who permitted me to hold his plow told my interpreter that there were twelve in his family and that he owned and was cultivating fifteen mow of land, which is two and a half acres, and that besides his team—a cow and small donkey—he usually fed two pigs. This is at the rate of 192 people, 16 cows, 16 donkeys and 32 pigs on a forty-acre farm; and a population density of 3,072 people, 256 cows, 256 donkeys and 512 swine per square mile.

In another case we visited, where the farmer is seen standing at a well in the two other illustrations, we found he owned and was cultivating ten mow of land; that there were ten in his family; and that he keeps one donkey and usually one pig on his one and two thirds acres, some of which, as the photograph on Page 4 shows, is occupied by the graves of his relatives. Here is a maintenance capacity for the little holding at the rate of 240 people, 24 donkeys and 24 pigs on a forty-acre farm, which would mean a rate of 3,840 people, 384 donkeys and 384 pigs per square mile of cultivated land. The sales of produce from this man's little holding in good years he places as usually about seventy-three dollars (gold). This sum must buy the clothing of the family, the extras and pay the taxes. In the two cases cited the usual crops are wheat, barley, large or small millet, sweet potatoes and soy beans or peanuts. In the province much wheat straw is worked up by the women and children into straw braid which is an article of extensive export. The cargo of the steamer on which we returned from Tsintao to Shanghai was made up of the two articles, shelled peanuts in sacks and straw braid for hats.

In the case represented by the two illustrations the well at which the man stands is eight feet deep, and has just been dug expressly for the purpose of saving the small piece of barley seen in the engraving, which is less than a tenth of an acre; and such wells could be counted by hundreds in the two hundred miles between Tsintao and Tsinan, nearly all of which would be filled at the beginning of the rainy season so as to leave the ground available for crops. And the simple



Chinese Farmer at His Plow—Primitive-Looking, But Effective



Portable Chinese Windlass for Well Irrigation—Close View

their one hundred and thirty-nine A and B classes of agricultural schools of second rank they had graduated in 1906, 12,371, and from the still lower grade of third rank there graduated in 1905, from the 2,450 supplementary agricultural schools, 14,927 students.

Food-Producing Capacity of the Far-East Farm and Farmer

With our population increasing at the rate of nearly a million a year during the last half century it is clear that we can hardly learn too soon or too thoroughly our probable limit of soil and crop production, and the best methods of insuring and maintaining it. Probably nothing can give a safer measure of the maintenance capacity of the farms and farmers of a nation than the number of people they feed per unit area of cultivated field, and it is doubtful if there is a better place to study this problem than in China and Japan at the present time.

construction and portability of the irrigation outfit is worthy of note. When the day's work is done everything but the well will be taken to the home. Often a man's holdings are separated by considerable distances and this arrangement permits him to move readily from one to the other.

The largest land-owner who lived upon and worked the farm, with whom we talked, was a widow and a Christian who, with her husband, had moved from Ningpoo into the Chekiang province after the ravages of the Taiping rebellion had annihilated such vast numbers of families, leaving the lands without owners. Here they had acquired a tract of one hundred and fifty mow, or twenty-five acres, and this the widow was managing in an admirable manner and, compared with Chinese holdings, it would rank with a fifteen hundred or two thousand acre farm in this country. The woman had two sons whom she had recently provided with wives, one of the sons being yet in school. She was employing nine men, paying them at the rate of twenty-four dollars Mexican, for five months or a little more than two dollars (gold) per month, and at the same rate where they were hired by the year, providing them four meals per day. In this case the density of population per square mile of cultivated land would figure out at 358 people, 102 cattle and 384 hogs, or 460 consumers and 384 transformers, there being four cattle and fifteen hogs maintained on the place.

The average of seven Chinese holdings

where we obtained similar data places the maintenance capacity of the land at 1,783 people, 212 cattle and donkeys, and 399 hogs, or 1,995 consumers and 399 transformers per square mile. These statements for China represent cases of strictly rural population. If we divide the rural population of the United States in 1900 by the number of square miles of improved land at that time, the result shows an average of 61 people per square mile, while, as we have stated, there are

States—more than twenty-two times as many. On the other hand, Japan's transformers are only 13 per square mile against our 266.

On the large island of Tsungming in the mouth of the Yangtse River, with an area of two hundred and seventy square miles, according to the official census of 1902, there is a density of population of 3,500 per square mile and the island contains but a single large city, so that the rural population here must be very dense.



Irrigating With Portable Outfit From a Well Dug Expressly to Save From Drought a Piece of Barley 12 by 57 Paces. The Large Mounds in the Background Are Ancestral Graves

nearly 30 horses and mules, making the consumers 91 per square mile: while the dairy and beef cattle, pigs and sheep, taken together, represent a population of transformers equal to 266 per square mile. In Japan the rural population in 1903, based on the cultivated land, was 1,922 per square mile and adding to these the horses and working cattle we have 2,047 consumers per square mile in rural Japan as compared with 91 in the United

What will be our condition and our ability to maintain when our ninety millions shall have increased fifteen or twenty-fold, giving us the approximate density of China and Japan to-day? In making these comparisons between the United States and China and Japan data are not accessible for making a correction for the number of horses, cattle and sheep maintained on range lands and hence the difference in density is larger than has

been stated. This will be clear when it is stated that five eighths of the sheep in the United States in 1900 were in the eleven states and territories: Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon and California, and hence to a large extent on range land not included in the area of improved farms.

It could not fail to be a matter of the highest industrial, educational and social importance to all nations were it possible to bring to them a full and accurate account of all those conditions and practices which have made it possible for such dense populations to be maintained so largely upon the products of Chinese, Korean and Japanese soils. Many of the steps, phases and practices through which this evolution has passed are irrevocably buried in the past, but such remarkable maintenance efficiency attained centuries ago and projected into the present with little apparent decadence merits the most profound study and the time is fully ripe when it should be made. Because we are in the morning of a century of transition from isolated to cosmopolitan national life, when profound readjustments, industrial, educational and social, must result, such an investigation cannot begin too soon. Each nation should study the others and by mutual agreement and coöperative effort the results should become available to all concerned, made so in the spirit that each should become coördinate and mutually helpful components in the world's future progress.

Two Hundred and Twenty-Six Bushels of Corn

How It Was Made on a North Carolina Acre—By Fred A. Olds

There is a national significance to the North Carolina contest here chronicled by a member of the committee of award. We do not mean that the winning yield is one that should be duplicated everywhere, or even on the farm of the man who won; nor is it probable that the winning system of close planting and the growing of many ears to the stalk is the best for states less favored in the way of a long and sunny growing season. But the contrast between the possible and the usual yields has force everywhere; and the lesson of deep and thorough tillage and the use of high-class seed is worthy of application by every corn-grower in the country.—EDITOR.

NO CORN-GROWING contest ever held in the United States has attracted such general attention as that in Wake County, North Carolina, this year. The movement was inaugurated by James H. Pou, Esq., a prominent member of the Raleigh Chamber of Commerce; the Virginia-Carolina Chemical Company, and the Caraleigh Phosphate and Fertilizer Works. Big things were expected from the start, it having been currently reported that in South Carolina two hundred and forty bushels had been grown on an acre, though this was not official.

As summer came along there began to be talk of the corn which J. F. Batts, whose farm is about a dozen miles south of Raleigh, was growing. A wind-storm swept through this section in August and blew this corn into quite a tangle, though none of it was blown clean to the ground. The damage was not serious, though it undoubtedly cut down the yield. The governor of the state, other high officials, persons connected with the Agricultural Department and farmers of all degrees went to see Batts' corn, and the talk of it spread to county after county. It was a prolific corn, very white, with small ears, and on some of the stalks there were as many as ten ears. The calculation was made that there were as many as 19,000 stalks on the acre. Most of those who saw the corn figured that there would be from forty-five to fifty barrels up.

In view of such an expected yield as this a number dropped out of the competition, though most of these have said that they were greatly pleased at their participation as far as they went. Thus one man who did not measure his corn for prizes told me he had grown ninety-three bushels of large ears of corn on his acre; another said his yield was eighty-seven bushels.

In the late summer a circular was sent out to the participants, calling for their reports, which were to be sent to Commissioner of Agriculture William A. Graham, veteran farmer, very familiar with corn-growing, and T. B. Parker, demonstrator for the Agricultural Department and in charge of the state corn-growing contest for boys. Batts showed his corn at the state fair, late in October, and also at the special exhibit in the state museum during the very notable session

of the Farmers' National Congress at Raleigh early in November, where people from thirty-seven states besides North Carolina expressed their astonishment at the yield.

A sworn report was filed by Mr. Batts with the committee, of which the writer is a member. Mr. G. W. Williams, himself in contest, having made the statement in writing that he did not believe Mr. Batts had grown so much corn, the committee gave a very full hearing in this matter on Saturday, December 4th, at which Batts and Williams and witnesses on both sides were present. The investigation was thorough, and Mr. Williams absolutely failed to make out any case, the decision of the committee being unanimous that Mr. Batts had made the yield sworn to, and that the corn had been correctly handled and measured. A statement signed by the

land, but I had been working on my seed in a little plat for seven years and I attribute thirty to fifty per cent of my yield to the prolific quality of the seed.

"I kept a diary about this acre, and this shows that on March 12th twenty-five two-horse wagon-loads of cow-manure were spread on the acre, a spreader being used. March 15th the land was broken with a No. 19 Oliver chilled plow, twelve inches deep, a one-horse Dixie turning-plow following in the furrow behind, plowing to a depth of six inches, which left the land broken up to a depth of eighteen inches. The land was harrowed with a smoothing harrow the same day. April 9th twenty two-horse loads of manure were spread on the land, which the next day was broken crosswise to the first breaking, this time to a depth of twenty inches, and was harrowed the same day. On April 15th eight hundred

nitrate of soda was broadcasted in the middle and harrowed in. On June 9th another mixture of two hundred pounds of cotton-seed meal, two hundred pounds of acid phosphate, four hundred pounds of kainit and two hundred pounds of nitrate of soda was broadcasted in the middle and harrowed in, the corn being four and one half feet high at this time. The corn was laid nearly flat by heavy winds June 14th and 17th, and had to be straightened. The total amount of commercial fertilizer used cost \$58.80. The corn was gathered in the old way, the fodder being left on the stalk. The cost of producing this yield of corn from the time of the preparation of the soil to the housing of the crop was \$139.02, this being made up as follows: Cotton-seed meal, \$14; kainit, \$10; acid phosphate, \$12; nitrate of soda, \$15.75; guano, \$7.05; cow-manure, forty-five loads, \$56.25; labor and team, \$23.97."

It is said that there were two plantings of the corn grown in South Carolina above alluded to; the second planting being when the first corn was several feet high, but Batts planted all his corn at once. The stalks were rather tall and slender and the ears were graceful in outline and very regularly distributed on the stalks. So dense was the corn that one looking into it could see but a trifling distance. In fact it grew so thickly the effect was that of ensilage corn. The deep plowing was a curiosity to many of the neighbors, and on a corn-lot only a little distance from this wonderful acre a contrast was afforded between old methods and new, for the farmer did not get over fifteen bushels to the acre, not very good corn at that. He has a contempt for deep plowing, just as his father had before him, for in the old slavery days it is said that the father once observing one of his negroes turning up subsoil stopped him, telling him that only top soil must be turned over.

The stimulating effect of this contest cannot be realized even yet. The man next to Mr. Batts got one hundred and fifty-seven bushels, and his fourteen-year-old son one hundred and twenty-five, while a Randolph County boy of the same age grew one hundred and thirty-five to his acre. State Demonstrator Parker of our committee tells me that the several hundred boys in this club who competed raised over seventy-five bushels and that the average of all competing exceeds fifty bushels.

It was well that a contest was made of Mr. Batts' yield, for the hearing brought out everything in regard to the matter and clinched it absolutely. Mr. Batts gets fifty dollars of Mr. Pou's prize and two and one half tons of any fertilizer he may select made by the Caraleigh Company. His corn is in great request and the stalks which contain numerous ears have been special attractions to corn-growers, notably one with ten ears. Governor Kitchin, who has spent a good deal of life on the farm, said he never

[CONCLUDED ON PAGE 7]



Mr. J. F. Batts and His Prize-Winning Corn

three members of the committee was issued in due form, setting out to all the world that on a sworn acre of land two hundred and twenty-six and two thirds bushels of corn had been produced.

Now everybody wants to know how Mr. Batts did it. Here is his story:

"My land is upland; sandy soil, with yellow clay subsoil, and it produced only five bushels eight years ago and eight bushels of wheat last year. I followed the wheat with peas in the summer of 1908 and cut about three thousand pounds of pea-vine hay. With such a poor start, as far as the land is concerned, I had to cultivate and fertilize to the full extent of my ability. Fortunately I have been selecting and improving my seed-corn for seven years, and if my two hundred and twenty-six and two thirds bushels to the acre proves anything it proves the wisdom and value of improving the seed. I had but one year in which to prepare my

pounds of acid phosphate, sixteen per cent, was broadcasted, and two thousand pounds of cotton-seed meal harrowed in. The next day the acre was laid off in rows forty-one inches apart with an Oliver chilled plow, running twice to the row, throwing the dirt out as deep as possible. Then six hundred pounds of Holmes' best eight-three-three guano was put in the rows, and with a Planet Junior with two small wings I made a small ridge about five inches below the surface of the ground. The corn was planted April 17th, a planter being used, dropping the corn about eight inches apart, three grains to the hill, and about three inches deep, the amount of seed used being three gallons of Batts' prolific four-year corn. On May 27th a mixture composed of two hundred pounds of cotton-seed meal, two hundred pounds of acid phosphate, four hundred pounds of kainit and two hundred pounds of

Luther Burbank—An Estimate

What His Work Has Meant to Farmers and Orchardists—By Charles J. Woodbury

Luther Burbank has been a victim of ill-considered publicity. His work has been fulsomely exaggerated; now, many people are being just as hasty in depreciating it. Most of us have no realization of its scope and value. Only his showier achievements and his single apparent failure, the Wonderberry, have been exploited. Farm and Fireside therefore presents this appraisal of his contributions to our plant wealth, written by one who has an unequalled personal familiarity with the master horticulturist and his work. We believe every reader of it will agree that Luther Burbank holds an unshakable place among the Benefactors of Agriculture.—EDITOR.

IT WAS in 1873 that Luther Burbank answered the demand for a potato which should yield two hundred bushels to the acre by producing his famous seedling from the "Early Rose" (itself from seed of a Garden Chili plant) which at once gave a yield of four hundred and thirty-five bushels and has since attained to five hundred and twenty-five bushels. It has become a permanent product, foremost here in California where it is known as "The Salinas Burbank," but grown all over the East and abroad, its value to the country estimated at twenty million dollars.

This extraordinary start was made at Lunenburg, Massachusetts. Just twenty years after, from Santa Rosa, California, appeared a pamphlet of some fifty pages, now long out of print, entitled "New Creations in Fruits and Flowers." Its modest preface reads, "We are now at the gateway of scientific horticulture." On its title-page are the words; "Keep this catalogue for reference. You will need it when these fruits and flowers become standards of excellence." How much of this has "made good?" What are the things that count?

The book is mainly concerned with fruits natural to the state, adapted to the hot sun of interiors, to moisture from fogs rather than showers, to winters of rain instead of snow. In the sixteen years that have elapsed since its appearance, California has become a leading horticultural state. Even now, when California fruit-growers are rigorously reducing the kinds of fruits they are growing, when rejections are many and acceptances of new varieties few, offerings emphasized in this little book are retained and even adopted as ideals.

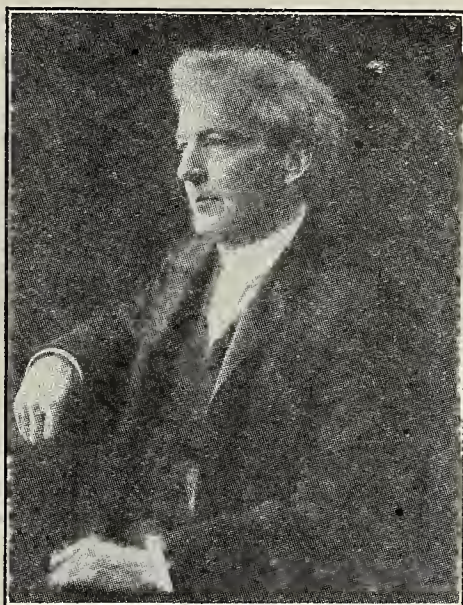
Among the list, the series of plums have proven themselves to possess projecting vital force. Beginning with experiments on the hardy, but tiny, Beach-Plum of the Coast, Mr. Burbank has certainly rescued, mainly through his Japan (Satsuma) introductions and crosses, the plum from its stone age. Their hardiness and capacity to withstand extremes of temperature have made the Burbank Wickson standard from Canada to Australia and Africa. They are the prominent shipping plums of California. Follow closely the Delaware, Alhambra and Juicy. The Bartlett, Climax, Chalco, Gold and America (valuable for its extreme earliness) are hardy and productive in New England and Canada. The Maynard is established in northern California. Another plum which has been found congenial to the temperatures of distant zones is the Santa Rosa. Other plums not yet extensively distributed are the Formosa, Gaviota and Vesuvius. They have been under careful investigation on the experimental farm at Sebastopol, near Santa Rosa, for from five to nine years, during which none of them have failed. The current season has seen their first general introduction. The Gaviota is one of the American-Japan crosses. Its pit is diminutive. The Vesuvius is not an abundant producer; but noticeable on account of its growth-power and picturesque foliage. The Formosa has exceptional keeping qualities.

The story of Burbank's Sugar Prune is interesting as a romance. Omitting details, the working prune in California, although disappointing in many features, had been for half a century the French variety. The shape of the tree was bad. It required too much pruning. Its

root habits were faulty; it did not penetrate to moisture. It was not very long-lived, sometimes intermitted a year in bearing, sometimes carried foliage too thin for the warmest California climate. The fruit formed too far out on the branches and had no distinct flavor, being simply sweet. It often cracked, was too slow in ripening, frequently incapable of being gathered in time to dry before the rains.

When after sixteen years of labor and waiting Mr. Burbank produced his Sugar Prune, B. M. Lelong, then State Secretary of Horticulture, said of it:

"It ripens August 1st, cures superbly, flesh is yellow, tender and rich in sugar, average size is two to three times larger than the 'petite' or ordinary French prune; is an unusually vigorous grower and very productive. The analysis at the California Experimental Station shows that this prune contains 23.92 per cent sugar, while the average French prune contains 18.5 per cent."



Luther Burbank

Siberian raspberry. It has been pronounced the best table-berry known. It is a soft picker, but people living within a few miles of a market could make money growing it. It is larger and rounder than the famous Loganberry, superior for jam or any variety of cooking.

More extensive commercial growers are the Phenomenal and Himalaya, crosses of the red raspberry and blackberry. They grow one and one half inches long,

of a valid new species, the first recorded instance, as has been claimed by one scientist, of such a feat by man—was accomplished in the Primus berry. To attain this, forty species of Rubus were tried. For twenty-five years the process received constant attention. Fruits which would have satisfied ordinary horticulturists were abandoned. Five thousand seedlings were destroyed. Nine hundred thousand berry-bushes were burned in a single season. The Primus is a blend of the native Pacific Coast blackberry and the

accident produced by the wind or the bees.

Mr. Burbank has worked with apples. Of commercial value in the Northwest is the Tokapuna Russett from Australia, which he introduced some fifteen years ago. He has now under experiment a seedling of the Newtown Pippin, a handsomer fruit than its predecessor, not yet introduced.

The best in quality of any quinces known here are the Pineapple, Childs and Van Deman. The latter is the most productive. The only quince I could ever eat without wincing was the Childs, four years ago in Mr. Burbank's Sebastopol nursery, from two-year-old trees, then only three and a half feet high. They were bent almost to the ground with their fruit which hung quite from the soil up the stems to the top. Of this quince, Mr. Burbank said, "It is the earliest to ripen, earliest to bear, productive to my astonishment. Every season, these and elder trees, the fruit is always smooth, handsome, lemon-yellow, very large and cooks in five minutes."

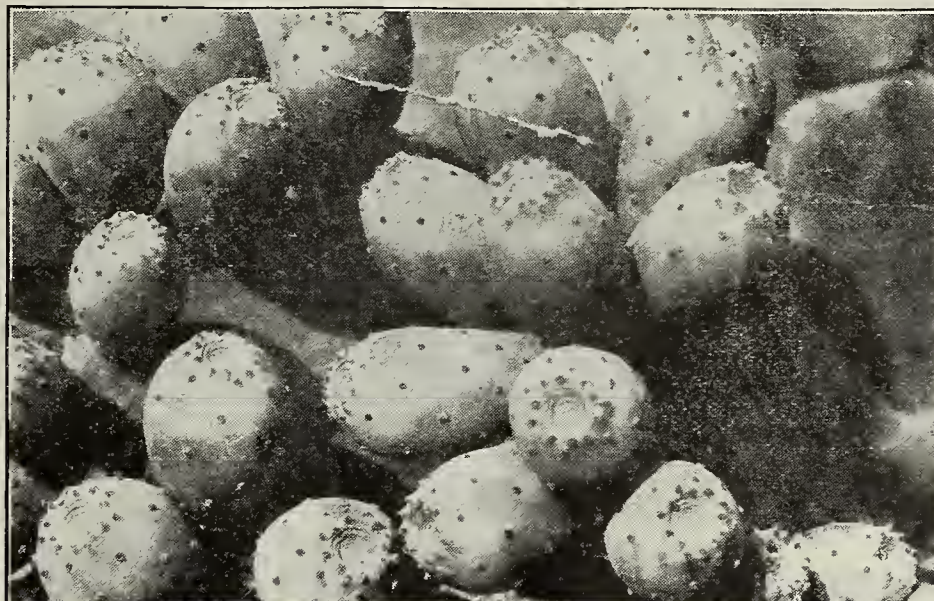
The Opulent peach has been proclaimed by the leading horticultural journal of California, the Rural California of Los Angeles, to be a fruit of recognized worth. In 1902, the Early Burbank cherry was disposed of to a syndicate of horticulturists. This year it was sold in Philadelphia for thirty-one dollars per ten-pound box, asserted to be the highest price for cherries in any market. The Crimson Winter Rhubarb, now shipped from Pasadena, Pomona and Los Angeles in car-loads to the Eastern market, came from a variety Mr. Burbank obtained fourteen years ago from Australia, its stalks then about the thickness of a lead-pencil.

When I first visited Mr. Burbank's place, I had just come from the forlorn, few survivors of the soon to be historic cypress at Monterey—the saddest landscape on earth—where that aged conifer is yielding its last life in an unequal struggle with the unceasing, relentless winds that sweep with full force the Pacific Coast. My welcome to Mr. Burbank's gardens at Santa Rosa was his amazing shade-trees, a magnificent row fronting the whole place against the highway. They are his walnuts, fruitless, but prodigal of branch and rich, glossy foliage, even the skin of their trunks exhaling odor. Confronting these huge hybrids, across the road, remained a few relics of one of their parents, the Eastern black walnut. The contrast was eloquent. It at once suggests to the visitor what he may expect to find within the grounds.

The new walnuts are called "Paradox" and "Royal." They from the start increase in girth and height twice as rapidly as the combined growth of both parents, the black and the California. Professor Kellogg of Stanford University ranks them among the most rapidly-growing trees of the world. They are found now in detachments over the Pacific country, in the Southwest and Southern states, north to Pennsylvania. They were first sent out in 1893. Since my introduction I have seen large groves of them in various parts of Sonoma County, trees four years from bud as large as California trees ten years old. They give lumber strong, durable, and taking a remarkable finish by reason of its compact grain and fine gradations of light and dark shadings. As a shade-tree they far surpass the maples in the speed with which they reach results and in general appearance. The bark is smooth, grayish with white marblings, not unlike the

bark of the sugar maples in the East. The leaves are long, symmetrical and of a fragrance resembling that of fine apples. The trees yield only a scant crop of nuts, and this only after twelve years persistent barrenness. Any tree so suitable for ornamental or avenue purposes, should not be expected to yield much in the way of fruit.

Utilities should not constitute the sole interest of even the busiest farmer's life. It should be margined with those things which have no other



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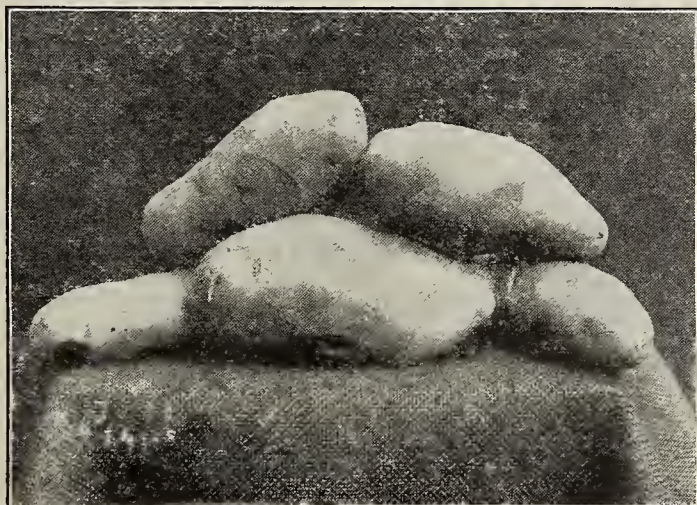
Spineless Cactus Growing in Burbank's Experimental Grounds, Santa Rosa, California

This magnificent fruit, the inception of which was Mr. Burbank's desire to help California fruit-growers, was neglected by them. Eastern nurserymen recognized and adopted it first. Even in Europe it was acknowledged. Then its superiority was discovered in California. One California town, Vacaville, was literally built by it and the cherries. It ripens twenty-eight days before the French; and though nearly four times as large, dries in half the time. It is a better grower and bearer, with better form and foliage; it requires less shear attention. It is now known as the Pedigreed Prune, and has almost exclusively won over the market as a shipper.

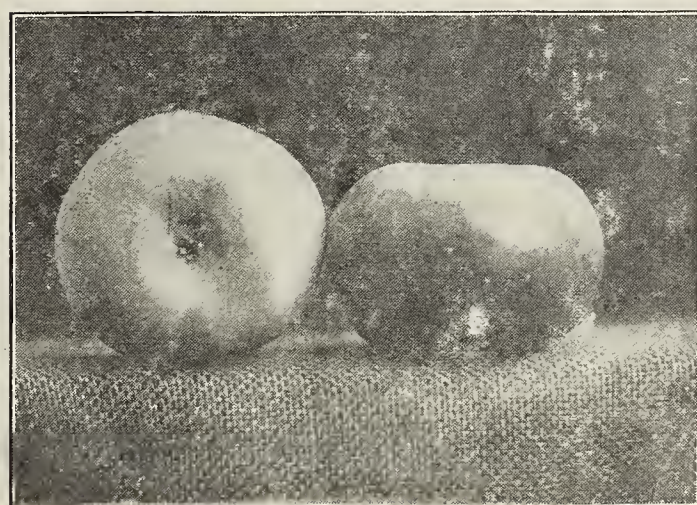
But, as the ancestor of the Burbank potato was a potato, the Sugar Prune was a regeneration of the French Prune itself. A structural change—the creation

from two to three times as big as the Logan, although that is large. They are almost seedless and flavored much better than the ordinary raspberry. They are now pretty well distributed over the country and have gone a long way East. The vines are hardy and productive, free from extreme branching and thorn, and the size makes picking easy. They are the best for market purposes, for which the Primus is too delicate and soft. Neither of these have reverted. The seedlings come true to type.

There are others, numbering nearly a score, among them wine-berries, growing in clusters and easily shaken from the bushes when ripe. Some of them are detained in the long trial-stage as not demonstrated; some of them are still curiosities. They are all hybrids; as, indeed, the Loganberry was—a Nature-



The Burbank Potato—the Master's First Achievement



A New Seedling of the Newtown Pippin—Not Yet Introduced

mission than to be beautiful. Santa Rosa is a great garden of roses, and the inhabitants credit it all to the shy, quiet man whom they know not only as an experimenter, but as a lover of flowers. Many of his roses look askance upon foreign temperatures. Here they have climate. In Ohio they would find weather. But there is one of them that has proved itself to be a good traveler and stayer. It is the Santa Rosa or Burbank rose. There are really two roses from the same cross. The bloods of the Hermosa and the Bon Silene are in their veins; and, oh, but they are reckless roses, prodigal all the time; roses for everybody, everywhere.

Burbank's flower achievements are beyond enumeration here—they include myrtles, gladioli, amaryllis, dahlias, callas, lilies and variants of the poppy, the state flower. Not all of these are confined to the warm, dry atmosphere in which they were born. Strains of them, such as the "California," the nearest approach to a double gladiolus yet obtained, are naturalized in Oregon, Indiana, Massachusetts and Canada. "They are very fine," writes a Cuyahoga Falls, Ohio, correspondent, "they endure our hot sun better than most of ours; they also keep longer in water." The cyclopedia of horticulture places this gladiolus in advance of the European varieties. A fragrant new race has sprung from the "Little Gem" calla seedlings. Of the cannas, the "Tarrytown" took the gold medal as the best blooming canna at the Pan-American Exposition. The "Burbank," introduced a year subsequent (1898), is on sale by seedsmen and florists in America, Canada and Great Britain.

The Shasta daisy is a creation too well known for more than mention. I merely emphasize here its premier honors as a cosmopolitan. Carrying four times as much bloom as the ordinary daisy, it has no competitor in the horticultural world for its power to assimilate climates. It is as congenial to all environments as the English sparrow. It is especially the poor man's flower. It is at home all over the United States and the Canadas, in Australia and South Africa. Where the sun blasts and the snow beats, one may greet its cheery, honest face. But, unsatisfied with certain limitations, Mr. Burbank has continued his building work on this great flower, and evolved his "Alaska," "California" and "Westralia." These retain all the merits of the Shasta and add features of greater diameter of blossom; a more glistening whiteness and greater resistant vigor to unfavorable conditions. They were christened five years ago, but have not yet been sent out. They may never be.

Personal Caution and Press Hyperbole

For a severer judge of his work does not live than Mr. Burbank. No desire to realize the result of years tempts him to graduate what seems to him imperfect. No one more keenly or firmly than he will point out the as yet unachieved qualities in what are proclaimed his successes. I have often heard him, to the numerous inquirers who come ready to hear and believe everything regarding what they have looked upon as his masterpieces address cold and critical speech. I mention this because it may be thought that the glowing misrepresentations from over-enthusiastic press artists reflect the atmosphere of Santa Rosa and Sebastopol. Nothing could be farther from the fact. The master's temperament and methods are slow and not congenial to American space-writers. His unusual works make hyperbole natural. So they are written

about often in rainbow ink, sometimes, with hysterics, sometimes by persons who never got beyond his secretary. Indeed, Mr. Burbank discourages visitors. The approaches to his grounds are conspicuous with signs almost forbidding entrance, limiting interviews to five minutes, prohibiting them except by previous appointment, and so forth. His work requires constant vigilance, and he has found this protection necessary, but savoir-faire is sometimes wounded. This summer a garden association at Pasadena was misled, I think, into passing a series of resolutions condemnatory of Mr. Burbank and his methods. An unheralded call on Mr. Burbank on the part of a man influential in this association had obtained for him slight attention. His visit was necessarily superficial. Such a man coming in such a way found everything flat. Of course he did. He learned nothing. People not up on a thing are usually down on it. As for the resolutions, whose very reading discloses their irresponsibility, haste and unimportance, they were condemned by the most prominent California horticultural journals immediately; and in September severely criticized by the association of the state florists and nurserymen convened at Los Angeles. They were held to be an illustration of the flea and the lion. Nothing in the occurrence matters except for the impression the local report has made in the East relative to an attack originating there upon Mr. Burbank's last production given to the public.

The Regrettable Wonderberry

For many years he has been working on Solanum possibilities. One of his cultures, the crossing of the African stubble-berry (*Solanum guineense*) with the Pacific Coast (*Solanum villosum*), resulted in a fruit resembling the common blueberry. Mr. Burbank called his product "sunberry." It was found to be edible, even delicious to some palates; and, growing true to type, it was, perhaps prematurely, delivered to Childs, who put it out as the "Wonderberry." The Rural New Yorker pronounced it to

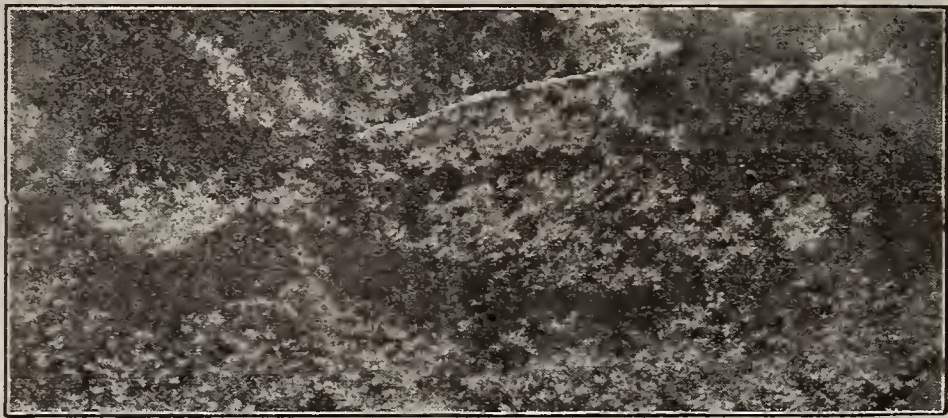
tanical Garden, pronounced it "a *Solanum*, of the affinity of *Solanum nigrum*, the black nightshade or garden nightshade." But adds, "I am unable to give you any first-hand information about this plant, because it has not yet developed flowers and fruit with us." The Rural New Yorker further states that in Louisiana, Texas and Mexico the new plants are pronounced to be black nightshade, and that after its berries had been sampled by a dozen people in New York, "only two would swallow after tasting, and no one wanted a second dose."

This constitutes the arraignment versus the "new claimant," except that the editor of the Rural New Yorker publishes an interchange of correspondence with Mr. Burbank, in which the great horticulturist mars his case. He does not show to advantage in controversy.

In California the facts are that the plants are growing six and even eight feet across. They spread over the ground like a vine and they come loaded with fruit. The unripe berries taste bitter. When ripe, they have a slightly acid taste and when dead ripe they are sweet. They are pronounced as making delicious pies. There is not enough of the fruit here to supply the demand which itself has created.

The testimony of such investigators as Doctor Britton lacks practical familiarity. Any original of the Burbank cross has not been discovered. Even if it is pronounced to be a variant of the nightshade, that hardly signifies. All our cultivated fruits are bred from the wild species. This, one probably, should have been brought to a higher perfection before it was offered to the public.

Prof. E. J. Wickson, Professor of Agriculture in California University, likens it to the tomato. They both belong to the same family, the Solanaceae. At first the tomato was thought to be inedible, even poisonous. The contradictory experiences with the sunberry or wonderberry do not justify immediate conclusions. The new berry is at least a distinct advance, and its prodigal vegetation and muscular coarseness may disappear.



The Australian Star—a New Creation Growing on the Experimental Farm at Sebastopol

be a variant of the black nightshade, which in England is a poisonous plant, and quoted "The Gardener's Chronicle," an English publication, in support of this conclusion. Furthermore, Professor Corbett of the Arlington government testing gardens identified the new plant as identical with the ordinary garden huckleberry. Doctor Wheeler, botanist for the United States Department of Agriculture, stated that he could not separate the Childs (Burbank) plants from the *Solanum nigrum*; and Doctor Britton, director-in-chief of the New York Bo-

All fine fruits are artificial. Nature only continues the species. Van Moris, the first originator, demanded five years before recognition of any new-bred plant.

Meanwhile Luther Burbank's name attached to fruit or flower is the highest distinction it can have in any catalogue. That it has not been impaired by recent criticism is suggested by the state of Georgia's recent request of him to take up the improving of the cotton-plant and the urgent calls on him to develop the sugar-cane. Such solicitations manifest also the reputation he has for doing prac-

tical things. It is at the cost of self-denial. One has to be with him to see how many inviting developments he continually resists: fruits opening out into freaks; flowers showing what bizarre forms they would gladly enter into. But he creates no oddities that are not utilities; no achievements that cannot be reproduced in zones clement to refined vegetable life. He recognizes potentialities concealed from all of us; takes a valuable tree, impoverished with a defective and inadequate root system or with foliage so scanty that the sun blackens its blossoms the day they ripen, or, again, sensitive to blight and drought, and rescues it from these conditions; gives it the advantages of agencies it has long asked for in vain; makes it hardy, prolific and prolongs its fruit season; coaxes or coerces it into prodigality.

The extent of his work has not been understood. His botany is not a museum of mummies, corpses of plants, some of them extinct, but of plant companionships. The classifications of the standard instead of being permanent he has shown to be fragile. He has pioneered horticulture into the dignity of a science. He has broken down the frontiers of species, creating species as fixed as those which date back to the beginnings of vegetable life. His catalogues have become textbooks abroad; his discoveries occasioned new laws in the botanies. How his methods decrease the area of land needed for the support of man! A thousand acres less profitable than a score. He invents superior processes of plant development. He has largely corrected established conclusions deemed final concerning the nature, characteristics and identities of plants, their relations to one another, their generation and revolution. A solitary experimenter in a new land, how does his accomplishment compare with the older, progress of horticulturists in the older, highly specialized civilizations? And yet no sooner was it known what he was doing than he was attacked, especially by the religious, who accused him of irreverence for crossing "the external barriers of creation."

But more than the negotiated values to the public of the plants and fruits, the trees and grasses he has produced and ennobled—more even than the revelation he has given of intensive farming, showing how limited areas of field and farm can be made profitable when manured with brains—is the awakening and impulsion he has given not only to his craft, but to the country at large by showing what can be done with the fruits and flowers, even the wayside weeds. All men know and love fruit and flower better because of the new wealth he has given them. What weed, rowdy of the town or vagrant of the wood but has a new interest because of him? Indeed, we are seeing that there are no weeds. In how many communities, while you are reading these words, are men and women and boys and girls planting, selecting, hybridizing because of him! I could write another paper as long as this, telling of the things they have done—new oranges grown three hundred miles north of the old orange belt, orange-lemons, orange-pomelos, new sod from crossing of Texas and Kentucky grasses, potato-tomato grafts, seedless egg-plants and cucumbers, precocious lettuce.

A most unusual man! Of him, the great Hugo De Vries, professor of botany in the University of Amsterdam and originator of the new theory of evolution, said to me: "We have no man in Europe who can compare with him."

Something for the Boy's Own

By A. E. Vandervort

This gave him a net profit of a little over one dollar and fifty-eight cents a hen, which is a nice little income, considering that it represents the earnings of odd hours, for during the year he attended the high school forty weeks. His hens were kept in a modern house twelve by thirty and in an old shed. They were fed wheat or oats scattered in a litter of cut straw in the morning, at noon a mash of bran and corn-meal with boiled potatoes occasionally added, at two o'clock they had their green food, and at four o'clock all the corn they would eat up clean. In summer the green food was omitted and not so much corn was given, as they had the range of the whole farm.

A friend of mine gave his young, healthy, energetic son five dollars and told him to invest it to his own liking, subject, however, to his father's approval. The lad purchased a trio of Barred Rock fowls and turned them loose in a small, unused city lot. A record was kept, both of the expenses and the income, and as time went by, the more enthusiastic became the boy. The two pullets laid twenty-nine eggs during February, and these were put under incubation, and on

March 22d twenty chicks, spry and hearty, greeted our young experimenter and financier. Twenty chicks took much patience and care; but it was amply repaid when about August 1st he sold four of the pullets at one dollar and fifty cents each and four cockerels at two dollars each, amounting in all to fourteen dollars. It was a large sum in the eyes of the boy; and he had five pullets and three cockerels left for next year's work.

He had kept his two pullets down to work, and during March they laid thirty-two eggs which he sold for hatching at fifteen cents each, and by June 1st he had twenty-three more eggs, one of the pullets becoming broody. The April and May eggs were put under scrub hens and the two pullets were kept laying. Under the guidance of his father, the boy was learning some valuable lessons of life, lessons which every boy must learn sooner or later, or fail.

I shall not go into further details, but a few figures will tell the tale. The two pullets had to their credit two hundred and fifty-three eggs and one hundred and twenty-five chicks. Here are the items taken from his books on December 1st:

| | |
|--|---------|
| Sold thirty-one eggs at 15c each.. | \$ 4.65 |
| Four pullets at \$1.50 each..... | 6.00 |
| Four cockerels at \$2 each..... | 8.00 |
| Eight barrels of manure at \$1.25 a barrel | 10.00 |
| On hand seventy-six pullets worth | 76.00 |
| Twenty-one cockerels worth..... | 31.50 |
| The original trio | 5.00 |

| | |
|---------------------------------------|----------|
| Total income | \$141.15 |
| Expenses: | |
| Wire netting | \$ 3.25 |
| Poultry powders | 1.20 |
| Nails, hinges, etc..... | .78 |
| Lumber | 6.25 |
| Corn, wheat, bone, shells, oats, etc. | 19.25 |

Total expenses

Total profit, cash and value of stock

What this boy did, other boys who have helpers can do.

Give the boys a chance to raise poultry and have the proceeds for their own use, and in a short time they will have become appreciative of country life and be willing to make it their future; or they will have shown their utter lack of adaptability for it.

But don't loosen your grasp on the young people without first giving them a chance to do for themselves on the farm and show what is in them.

THERE are times when the monotony of country life seems unbearable to the boys, especially when it seems that from the farm they obtain only plenty of hard work, the food they eat and the clothes they wear. If we can plan some way by which the young men can make a start for themselves, they will be much more contented. Poultry-keeping offers an excellent way of trying out the feelings of the young folks at small expense.

I have in mind a boy who started in the poultry business with an old hen and twenty chickens which he purchased for one dollar. Last year his flock had increased from the original start to ninety-five. His record for the year with the ninety-five hens was as follows:

| | Income | Feed | Net Profit |
|-----------------|----------|----------|------------|
| January | \$ 21.28 | \$ 8.81 | \$ 12.47 |
| February | 16.65 | 7.51 | 9.14 |
| March | 24.17 | 8.10 | 16.07 |
| April | 27.70 | 11.74 | 15.96 |
| May | 29.60 | 5.25 | 24.35 |
| June | 22.60 | 7.28 | 15.32 |
| July | 21.88 | 9.63 | 12.25 |
| August | 20.36 | 11.44 | 8.92 |
| September | 21.26 | 8.50 | 12.76 |
| October | 12.94 | 8.05 | 4.89 |
| November | 15.07 | 8.65 | 6.42 |
| December | 22.64 | 10.17 | 12.47 |
| Total | \$256.15 | \$105.13 | \$151.02 |

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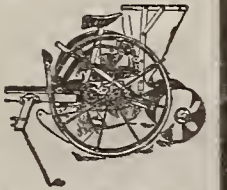
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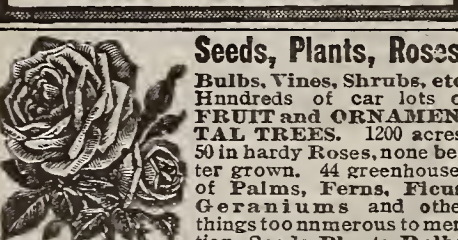
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Fruit-Growing

By Samuel B. Green

Fruit Associations

IT HAS been asked if it is practicable to establish a small fruit association where the sales do not aggregate over five thousand dollars per year. Fruit associations not much larger have been formed and have proved beneficial in many sections, particularly in the West. Combined marketing is much more common there than in the East, due probably to the fact that in the West the farmers are so far from the market that they do not receive such good treatment at the hands of their agents as do those that live near-by and in districts where conditions are more settled.

I have in mind a small fruit district in Minnesota, near St. Paul and Minneapolis, where there are three fruit-growing associations within ten miles. These associations will market this year respectively about \$20,000, \$40,000 and \$10,000 worth of produce.

They are organized with constitution and by-laws providing for an executive committee. The members of this latter attend principally to the business of the society, but they elect a general manager, who is the only paid official, and he gives his full time to the work during the fruit-marketing season. It is his business to keep in touch with the markets in his district and to see that they are supplied.

In organizing a fruit society of this kind, it is most important to get a good manager—one who is of active mind, thoroughly honest and desirous to please. Such a man is worth a good salary. In the case of a small association, marketing only five thousand dollars worth of products, the difficulty is in securing the right kind of a manager, as there is not enough business to require his entire services. Some person can be employed, however, who has other business but will have sufficient time to attend to this.

The three fruit associations mentioned market most of their goods in a sort of jobbing way, in small quantities rather than in car-load lots, as is customary from some of the more remote states. The advantage to the farmers in this particular case has been that they can stay at home and look after the cultivation and picking of their fruits without being bothered with the details of marketing. Formerly it was customary for these farmers to drive their loads of fruit about sixteen miles to the market, and there compete with one another in an effort to get rid of their fruit and to get home and attend to their business. This required an all-night drive, and was very hard upon the growers. Under present conditions, when these associations have surplus fruit, it is shipped to the Twin Cities by the wagon-load (about sixteen miles), and only a load at a time taken out and sold, so that the ruinous competition of the individual growers is done away with.

These small fruit associations have proved a great benefit to their districts, and I see in them a very hopeful omen for the future; for if farmers can combine to sell there is no reason why they cannot combine to buy, and the good results of such combined efforts would be felt all through our rural life.

Starks

S. H. D., Lyons, New York—The Stark apple is a variety that probably originated in Ohio. It has been grown successfully over a wide range of territory, and has received favorable notice in many large apple-growing sections in the North. It has not been largely planted in New York, but is regarded by some apple-growers there as quite desirable for commercial planting. It is vigorous growing and hardy, producing a large red striped fruit, more or less blushed with a dark red. It keeps well into the winter, equalling or excelling the Baldwin in this respect.

There is always a risk in new varieties whose adaptability is not well known, and, as a rule, it is not desirable to plant out more than a few trees. On the other hand, I think it very desirable that the progressive fruit-grower should do something of this sort, so as to keep in touch with the improvements that are coming out from time to time.

As to the desirability of top-working Stark with Baldwin, I would suggest that the best thing to do is to hold on until you have tested them. The chances are, however, that you will like this fruit, and that it will prove profitable, probably fully as profitable as the Baldwin.

Untested seedlings are always an unknown and unreliable quantity. I know of a case where a seedling tree of much

promise was introduced by a progressive nursery concern and a large number sold, and this in good faith, but before the tree had been thoroughly tested as a root graft. The introduction was a general disappointment to the purchasers, many of the trees proving to be non-productive for twelve to fourteen years.

Spraying and Pruning in Minnesota

M. O. B., Dodge Center, Minnesota—The fruit-growers of Minnesota and Wisconsin get excellent results from the use of sprays on their fruit-trees.

I do not think pruning is so necessary in Minnesota as in the Rogue River Valley, where apple-trees probably make a stronger growth and where they have less brilliant sunlight. Pruning should vary with the different varieties of trees and also somewhat according to the soils on which they grow. I have seen orchards in your vicinity that were pruned severely, and failed in consequence, and as a rule I do not advise severe pruning in Minnesota and Wisconsin.

The chief troubles with apples in your section are the curculio, which causes the apples to be deformed, and codling-moth, of the insects; and leaf-rust, scab and sooty blotch, of the diseases. These may all be prevented by spraying with Bordeaux mixture with a small amount of arsenate of lead added.

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The German Kali Works have talked Potash and its benefits for twenty-five years. They have never sold a pound direct to local agents or farmers.

You know how hard it was to buy and get Potash. Things have changed. The mines are now producing enough to enable us to offer

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in carload lots of twenty tons, to local dealers without interfering with the requirements of those to whom we have sold Potash to be used in mixed goods. We have, therefore, established a Selling Agency in Baltimore, Md., and in 1910 will sell all potash salts in carload lots for cash direct from the mines to the buyers in original sealed bags, or kainit in **Delivery Guaranteed** bulk, at lower rates than were ever before quoted.

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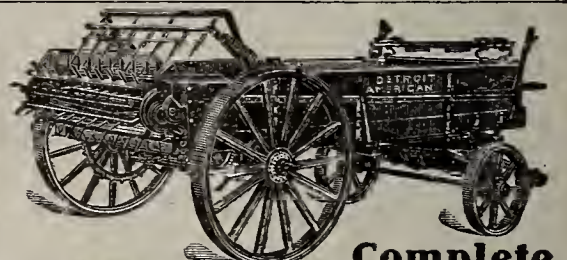
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Write today for the 1910 illustrated Planet Jr catalogue. It is free.

S L Allen & Co Box 1107 F Philada Pa

Gardening---By T. Greiner

Waterproof Cloth for Frames

AN OKLAHOMA lady asks for the formula of a mixture that will make common white muslin waterproof, for use on hotbeds and cold-frames. The simplest way is by saturating the muslin with pure, raw linseed-oil. As a better, but more complicated, way I may give that recommended in the Horticulturist's Rule Book (Bailey), as follows: "Three pints of pale linseed-oil, one ounce of sugar of lead, four ounces of white rosin. Grind and mix the sugar of lead in a little oil, then add the other materials and heat in an iron kettle. Apply hot with a brush."

Thin stout manila paper stretched over a frame and pasted on firmly with fresh flour paste, then painted on both sides with boiled linseed-oil, may do service in place of prepared muslin.

Manure for Celery on Muck

E. L. P., of Grand Rapids, Michigan, says he has an acre of black ash and elm muck on which he intends to raise celery next season. He proposes to apply twenty-five tons of mixed horse and cow manure, also five hundred pounds of celery fertilizer. "Am I right in this proportion," he asks, "or what would you advise?"

Never be afraid of mixed horse and cow manure for celery or of putting on too much of it. If it is well rotted, all the better. Nor will you be liable to do any harm by applying five hundred pounds of "celery fertilizer," which I suppose is a complete fertilizer having some nitrogen, eight to ten per cent of phosphoric acid and six to eight per cent of potash. Part of the manure may be applied in the bottom of the furrows, these partially filled up with soil, and the fertilizer strewn over it and then mixed with the soil with cultivator or rake. Another thing of benefit on muck soil is wood-ashes, either leached or (better) unleached, put on the same as the fertilizer or strewn alongside the rows of plants soon after these are set out. Liberality in the use of manures pays well with this crop.

Spanish-Onion Seedlings

The time is drawing nigh for sowing our first seeds of the Prizetaker and Giant Gibraltar onions for seedlings to be planted out in open ground in early spring. I want good plants, and in order to get them under the conditions available for them, I must sow the seed in January or February. Some people have the right kind of soil to grow good-sized seedlings in less time than I can do it, and for them perhaps early March might do. At one time I even sowed seed in hotbed early in April and got good plants to set out during May. The crop was large then.

Usually I have sowed the seed on the greenhouse bench, in rows one and a half to two and a half inches apart, putting the seed rather thickly in the row. Last year I sowed a large portion of it in flats, and find that I can handle the plants a good deal easier, as I can shift them about and, especially, transfer them in the flat to a cold frame outdoors when the time comes that the bench space is needed for tomato and other plants of that kind. So this time I expect to sow all my Spanish-onion seed for plants in flats. Most of my flats contain about three and a half to four inches of soil, and this soil, of course, will be sterilized.

Manures for the Home Garden

Mrs. E. H. C., of Haywards, California, writes that she lives on a hill ranch of about three acres; that she would like to raise vegetables and flowers, but finds it difficult to procure the manure, as she has no horse or cow. However, she has some chicken-droppings, and asks me whether these can be utilized and how.

We could hardly look for a more effective manure for the garden than that. Every week I haul out all the stuff I can gather up from the floors of the hen-house and coops, and scatter it evenly where I intend to raise onions and other close-planted vegetables next spring.

But in order to properly manure three acres this way, one would have to keep many hundreds of fowls. I use horse, cow and sometimes sheep manure, and fertilizers besides. Three acres of good land would raise many hundred dollars' worth of garden stuff, but to do it without a horse, and without manure—that is another question.

With a horse, you might collect manure

in the town, from livery and horse-owners who are glad to get rid of it. Otherwise, I see only one solution. Put half or a third of the land in some legume—whichever one does best in your locality—applying heavy doses of mineral fertilizers. Plow the growth thus obtained under for a manure crop. Next year sow your manure crop on the other half or third, and continue this way, alternating vegetables and the manure crop.

Planting Strawberries

For us northern people nothing can be gained by setting out strawberry-plants in the fall. The best time with us is early spring. Prepare the ground in the fall if you wish, using a good lot of weed-seed-free manure, and replotting and reworking the patch again in early spring. Then set good plants at the earliest possible moment—that is, when the soil conditions are just right. Keep under good tillage and free from weeds until fall, allowing a narrow matted row to be formed, and in the spring following (June) you will have a fine crop of berries. But unless you are in a mild region—the South or the coast—don't waste effort in planting fall strawberries, especially not in late fall or early winter.

Sun-Scald of Tomatoes

A reader complains of his early tomatoes having been badly sun-scalded in the hot July and early August sun, and wonders whether there is any remedy for it. Our first early tomato varieties of the Earliana type have rather thin and open foliage, but set fruit early and freely. If the sun comes out hot at the time spoken of the more exposed specimens are liable to become scalded, almost cooked. That has frequently happened in my patches. Mr. Morse, an expert gardener, tells in one of the agricultural weeklies that he has scattered a little hay over the plants and in this way prevented all injury from sun-scald. Bear it in mind when the tomato season comes around again. The varieties with heavier foliage, as also the dwarf or upright forms of this plant, Nuevo, Early Champion, Fordhook Fancy, etc., are not much subject to this trouble, nor are any of the standard late sorts.

Rhubarb and Asparagus Roots

The same reader asks whether it is now too late for setting rhubarb and asparagus roots. These roots are extremely hardy. You can take them up any time when the ground is not frozen and replant them, and they will live and grow again the next season whether mulched now or not. For forcing purposes, in fact, these plants may be taken up even when the ground is already partially frozen, left outdoors to become entirely frozen and later on planted under the greenhouse benches or on a warm cellar bottom for a winter or early spring crop. Gage the time of planting according to the time the crop is wanted. I usually put a few clumps of rhubarb under a greenhouse bench (in a dark corner away from heating-pipes) in the early part of winter, and a few more perhaps three or four weeks later for a succession, getting superb forced rhubarb in this way during the holidays and up to February or March.

Water-Cresses

A Springboro, Pennsylvania, reader says he has a fine spring near the house with a little land below it in which the water stands in all horse-tracks. He wants to plant this with water-cress to use and sell. How to plant it, is the question. Quite easy. Buy a little water-cress seed from your seedsman and scatter it along the margins of the little water-course in moist spots or shallow water, or get some freshly-cut branches of the plant from some near patch and scatter them in a like manner or partially insert them in moist soil or in the bottom of a shallow pool or ditch. The varietal differences are slight, although claims of superiority are made for so-called improved strains, like Erfurt Sweet, etc. The crispness and pungency of water-cress is very pleasant, and any one having a spring or pool or ditch where the water is shallow and slow-running, and the soil if possible quite sandy, can easily grow all he may want, year after year, by just starting it once. The plant is a hardy perennial, will spread rapidly and, when covered with water, will winter well.

Catalpa for Posts

R. R., living in northern New York, asks: "Is it true that catalpa speciosa will reach fence-post size in five to ten years, and is the wood durable and good timber for other purposes?"

Catalpa speciosa is fairly hardy here in western New York, and highly ornamental, and, when young, fairly quick-growing. It is easily propagated from seeds or root cuttings, and will reach fence-post size within the time stated. The wood is somewhat soft and coarse-grained, and is good for railroad-tie timber and many other purposes. It can be grown on any moist land, even if not particularly rich.

Tomatoes Mixing

Will tomato varieties mix when they are planted close together? That question comes from a reader in Rockford, Iowa. Tomatoes are quite liable to mix. I have at times had twenty varieties on an eighth of an acre, and preserved some of them in their purity; but that is a very uncertain thing. By saving seeds from such mixed plantings, I have obtained all sorts and forms of this fine vegetable. As I have such distinct types as Honor Bright in its dwarf form (Nuevo) and various forms of the Earliana class, the parentage usually is easily recognized in the offspring. The mixtures are often striking and interesting.

Fighting Blight

TOMATO blight is a fungus disease that works in the ground, attacking the roots of the plant, which wilts very suddenly. The smaller roots soon decay, and the larger ones are enveloped in a fungus covering usually called a "weft," and in it small brown bodies are formed.

The remedy we suggest is to dig up and burn top and roots of the plants that are diseased in the manner described. Some claim that frequent spraying with Bordeaux mixture will hold the disease in check, but I would prefer to get rid of plants and all as quickly as possible.

Do not set tomatoes on ground where there has been any trace of the disease. It is safer in any case to rotate with other crops than to raise tomatoes on same ground successive years.

Have the hothouse man, who plants the seeds and starts the plants, sterilize the soil in which he is to set the plants. This can be done by heating it to one hundred and forty or one hundred and fifty degrees Fahrenheit. That will insure a healthy start.

There is a dry summer blight that acts on the leaves of tomatoes as it does on the potato-leaves, by turning them brown, that can be controlled by spraying once a week with the Bordeaux mixture, and the crop saved, though the quality of the fruit will be somewhat injured.

N. A. CLAPP.

New Saws and Fresh Filings

Red blood keeps away the blues.

Beating about the bush is to be discouraged on the farm. Clean them away. Also scrubby trees.

An empty pepper-box is out of season. So is the farmer who is not full of new ideas about running his farm.

The farmer should produce three crops—selling, feeding and manure crops—and the greatest of these is all three together.

There is such a thing as subsoiling and rubsoiling. The latter is the rubbing of the plow in a shallow manner along over the top.

Andy Goodwin was down with a severe attack of pneumonia. It was spring, too, and time to begin plowing for corn. The medicine that did Andy more good than that the doctor gave him, and which indeed hastened his recovery, was the fact that all his neighbors joined in and gave him a day's plowing.

Some farmers decline to subscribe for a farm paper, on the ground that they haven't time to read, claiming that there are so many little things to do about the place after they get home from the field. If these farmers would study the columns of the farm papers from month to month they would soon learn how to manage their work so compositely and systematically that they would get through in half the time.

WM. J. BURTSCHER.

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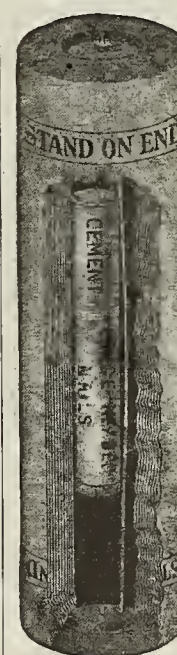
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Practical Poultry-Raising

The Care That Brings the Eggs

WHILE there is probably more profit in summer eggs at twenty cents per dozen than in winter eggs at forty cents, there is no good reason why the egg-basket should be empty all winter. All the hens need to make them "deliver the goods" in this time of high prices is a little extra care suited to the season. It is not too late for you to consider whether your hens are getting such care.

There are too many instances, even among well-to-do farmers, where no shelter is provided for poultry. A house, not necessarily expensive, but substantial and comfortable, is the first requisite for winter egg production. Nearly any building of suitable size can be converted into a poultry-house with a few days' labor and a little lumber or tarred paper. The latter is cheap and may be used on the inside or, better, the outside of the building; often over roof and all, except for the windows, doors and ventilators.

Any open spaces around the floor must be nailed up, and, if necessary, the earth banked up around the outside. This does wonders toward keeping out cold. Now for a few "don'ts."

Don't keep more fowls than you can accommodate without overcrowding. Don't keep hens and pullets together. If only one house is at your disposal, divide with wire netting into two apartments. Don't expect many winter eggs from old hens. If not too old, they will lay fairly well in the spring. Don't keep turkeys or other fowls with the chickens. And don't forget that laying hens require some sort of green stuff during the winter.

There is nothing better in the way of green food than cabbage. If the crop has been short, it is a good plan to sow a patch of rye early in the fall for hen pasture. Poultry of all kinds will eat it. Apples, etc., chopped raw, will be found valuable substitutes for "greens."

We usually give the hens a hot mash mornings when the weather is cold. A little before noon they are turned into the scratching-shed where they remain until evening. Corn is then given, which is always warmed in the oven before feeding. Be careful not to feed it too hot. Test by holding a handful of it for a moment. Parched corn is sometimes fed, but it will not take the place of raw corn. It should not be burned to a crisp, unless it is wanted for charcoal.

The morning mash is generally made of cooked vegetables thickened with equal parts of corn-meal and bran, with a little cut bone or bone-meal added. All kinds of vegetables, even squashes and pumpkins (with the seeds removed), are cooked and used as a basis for the mash. When potatoes are used, they are mashed and added to the ground grain after the latter has been thoroughly moistened. If dry meal is added to mashed potatoes, a tough, sticky mass is the result. The moistening process is not necessary with other vegetables that contain less starch.

Neither should onions be fed to laying hens. They give the eggs an unpleasant flavor.

A scratching-shed should be provided so they can be given their needed exercise without turning them outdoors in cold weather. A large shed at the south side of the house is an ideal place for this. Have the floor (or ground) covered about a foot deep with clean litter or dry leaves. Sawdust should never be used in or around poultry-houses. Scatter some small grain in the litter and stir it in with a pitch-fork so the hens will have to dig for it. This should be attended to regularly, at times when the hens are on the roost or confined in the house.

In adding bone to the mash, care must be taken not to use too much. Bone-meal should be used only when the raw bone cannot be had. Either should be fed not oftener than twice a week, allowing one teaspoonful of cut bone or one half teaspoonful of bone-meal for each hen. Fresh meat-scrap is nearly as good for laying hens as raw, or "green," bone. In butchering-time we always save the bones and scraps for them. Cooked bones, as well as raw, are saved and ground through a bone-cutter.

In cold weather, the morning mash is thoroughly heated before being fed. It should not, of course, be hot enough to injure the fowls; it should be just warm enough to bear the hand in without discomfort.

Sometimes the mash is composed of boiled oats, bran and corn-meal. A little salt is added about every other day. Powdered charcoal is added frequently. Broken charcoal is always kept within

reach, though occasionally the fowls do not eat very much of it. While charcoal will not take the place of grit, it is very beneficial in keeping the fowls in good condition. It is a great purifier.

When neither bone nor meat-scrap are at hand, we moisten the ground grain with milk. We also give the hens buttermilk to drink. But milk, as a drink, will not take the place of water.

Instead of the mash, we sometimes feed scalded oats. This is always placed in the troughs, the same as soft mixtures. Wheat is nearly always used in the scratching-shed. Oyster-shell and other grit is kept in small boxes nailed against the wall about a foot from the floor. Cabbage-heads are hung up against the wall for the hens to eat at will. This makes them work a little more than when it is thrown on the floor. We keep everything as clean as possible. Drinking-vessels and feed-troughs are scalded frequently, and the floors are cleaned, under the roosts, every day. We never give our hens ice-water to drink.

ANNA WADE GALLIGHER.

Trouble With His Bird Friends

A NEW JERSEY subscriber writes of some chickens of his which come dizzy from the roost, stagger in circles, and finally die, with foam coming from their mouths.

This trouble is probably due to what we call in people apoplexy. The causes, too, are much the same as with human beings, although sometimes internal parasites may lie at the bottom of the difficulty. I wonder if our friend has not been feeding his birds to much fattening food? If such is the case, the blood vessels of the brain become weakened, so any unusual strain may cause death. Any little scare, a blow on the head or even the exertion of laying a large egg will cause death. If one has the nerve and the skill to do it, it will relieve the immediate attack to open a vein under one of the wings. But the best thing to do is to give light, easily-digested rations until the flesh is reduced. I would look, too, for any signs of parasites. If we could and would keep our houses and surroundings neat as a pin always, provide clean feed and plenty of exercise, we would have far less disease. E. L. V.

Bettering Your Poultry Business

POINT number one: Work not to see how little you can give your birds, but how you can make them better.

And then, study to make your houses better. Hens have to spend a great deal of time in the house. It is their home. They know when it is neat and attractive. It makes a difference to them whether everything is right and well adapted to their comfort or not.

To succeed with poultry, we need to raise just as much of the stuff we feed on the farm as we can. Buying so much takes off the profit and often discourages us.

Never give anything to the hens that is not fit to eat. Decayed pieces of meat or anything else that has begun to be rotten never ought to be given a hen. They are cleanly creatures and are worthy of good clean feed.

Good stock is a prime essential. You may do something by treating your birds well, but that never will put better blood into them. Get the best stock you can.

Don't be satisfied with present attainments. Let every year see some progress. Work for the very best there is.

You will get all you deserve.

E. L. VINCENT.

Don't Excite the Layers

FEW poultry-keepers seem to realize that it pays to avoid exciting a laying flock of hens. The function of egg-production is intimately connected with the nervous system of the hen, particularly in the case of the Mediterranean breeds. In moving a laying flock from one house to another, I always coax them along with feed, rather than to worry them by chasing or carrying them.

I aim to keep my hens all tame enough so I can go into the yard alone and pick up one without causing a flurry among the whole flock. Yet when I wish to select any, I usually do it when the hens are on the roost, and especially if there are any strangers along. Hens are very quick to be disturbed by any strange person or unusual happening. Removing and placing litter in a pen usually frightens the hens unless carefully done. When you do anything about the hen-yard that excites the layers, you can make up your mind to a falling off in egg yield for a couple of days.

V. M. COUCH.

Sorehead in Fowls

AN INDIANA poultry-woman writes: "Some of my late chickens get warts or swellings on their heads, or their bills or one eye swells and sometimes bursts. Some live a few days, some several weeks. . . . I have tried a poultry-food and put lime in their drinking-water, nothing seems to help them."

It is probable that these chickens have a common disease called sorehead. This may result from the attacks of chigoes or other insects, or it may be a contagious disease known as chicken-pox. This last is more common during continued wet, cloudy weather. Would advise you to use a good disinfectant and plenty of whitewash about your poultry buildings and brood-coops. Trim all foliage plants used for shade at least three feet up from the ground so that the air can circulate freely beneath them. Do not allow the birds to run in tall weeds and thick grass or bushes. To treat the affected birds, remove them by themselves to a dry, airy place and bathe the affected parts with a mixture of equal parts of three-per-cent hydrogen dioxide and lukewarm water. After bathing, dry the parts thoroughly and apply a two-per-cent carbolic-acid ointment or an ointment made by adding one part of finely-powdered iodoform to twenty parts of pure vaseline. Where the disease is complicated by canker in the mouth, apply full strength of creolin or a little tincture of chloride of iron to the patches by means of a feather swab, using a fresh one for each bird. You may find it necessary to give the birds two or three applications a day or two apart. In the drinking-water given the affected birds use one grain of calcium sulphid to each quart of water, allowing no other drink.

A. E. VANDERVORT.

Hen-Scratches

SUPPLEMENTING Mr. Couch's remarks of November 25th, I can say that in my experience cooked potatoes have proved poor poultry feed; in fact they seem to check the egg output. Raw potatoes, fed crushed, are among the best green feeds being better than cabbage, turnip or onion, on account of their lack of odor.

Mr. Neale gives valuable advice that same issue on winter feeding and management, but I would suggest that instead of a board floor a good depth of dry sand be put down—and if there is a wood floor, that it be sanded thickly.

I have found that the hens turn out more eggs if kept indoors all winter. Of course in that case you need the best of housing, and a scratching-shed as an exercise place. Then your hens will enjoy life and be content, and they just can't help laying.

W. T. HENDERSON.

In Winter Weather

Clean up the windows and make the hens happy.

Warmth does not necessarily mean dead, foul air in the houses. Look well to your system of ventilation.

If you have had any plaster come off the house anywhere, give it to the hens. They will use it to very good advantage.

Eggs are going to be as good as gold this winter. Look at the price now! Make up your mind to have eggs to sell every day till next May.

Don't be so elated over a double-yolked egg. It shows that something is wrong with the hen's interior department. A change of administration ought to follow promptly.

The hen has no teeth. She does her grinding down in her gizzard, and you must furnish the millstones. Good sand, gravel and grit every day are the prime essentials.

For little chicks after they get so they can run out around, it is nice to spade up a bit of earth and give them a chance to work it over. They find no end of amusement in it and not a few bugs and worms in the bargain.

Keep the kind of hens you like to see about you best. We most all have our choice. Some men can't bear black hens—they make them think of crows. Others like black hens best of all. Let every man be fully persuaded in his own mind. Why? Because you will do better by the hen you like than you will by the one you care nothing about, and that will make the hens do better for you.

E. L. VINCENT.

Poultry-Raising

Langshan Basket Fillers

THE Langshans are large, upstanding birds, beautiful to look at. Their plumage is black with a green gloss, and the eggs are very large and dark brown. The birds are hardy from the start, and grow up to be first class foragers. They are excellent mothers unless excited, when they are liable to trample their chicks.

They mature early, and produce flesh that is firm, white, and of good quality.

Some poultrymen claim that on account of their size and being remarkably good market-birds they are not so good as the smaller breeds as layers. According to my experience they are in the front rank as egg-producers.

The flock pictured here was hatched from a sitting of eggs shipped about two hundred miles by express, and set under a hen about ten days after being received. Twelve eggs were fertile, but two chicks died in the shell, making a good hatch of ten chicks—five pullets and five cockerels. The five pullets and one cockerel were retained.

The pullets began to lay in December,

near, suspect them of being the source of your difficulty and act accordingly. If they are not on your premises, perhaps a word dropped with your neighbor in a kindly way might set him to doing a job of house-cleaning on his own account, which I should think he would want to do for the sake of his pets.

E. L. VINCENT.

Have You Neglected This?

It is not too late to ask if you have put the incubator, brooders and brood-coops away as they should be. A pile of coops which I saw the other day, half snowed under, with the filth of last year still adhering brought this query to mind.

Don't get the idea that ice and cold will purify those coops and brooders of germs of disease. Not all the ice coverings of six months will kill the bacilli of fowl tuberculosis or the bacilli of many another death-dealing disease.

Mites, too, will live all winter under the bottoms of brood-coops. In the past, before I impressed constant vigilance in this line upon myself, I have found them thick, gaunt and gray under these bot-



Black Langshans

when they were less than seven months of age. The cockerel weighs over nine pounds and the pullets are laying four eggs a day among the five of them. It is seldom that five pullets of that age will lay four eggs a day right along and during cold weather—not a common thing for fowls of the large breeds. This is the owner's second experience of the kind with this breed. If properly cared for the Langshans may be recommended as one of the best utility breeds.

LILLIAN J. JACKSON.

The Pest of Fleas

A FRIEND writing from Texas asks what to do for fleas. He says: "They collect around the eyes of my chickens in great patches and about the head in general. I keep my house thoroughly disinfected with lime and Kresol solution. I have tried salt grease, sulphur, kerosene and pyrethrum powders, but still they come."

H. W. M.

If this is the *Pulex Avium*, or bird flea, which I am inclined to suspect, it is one of the most difficult things in the world to get rid of, it multiplies so rapidly.

First, if you have not already done it, thoroughly scrape the floor of the house and scatter fresh sand or road-dust there. Take out all the roosts and other movable pieces of wood and wet them all over with a spray of six ounces of crude carbolic acid mixed with one gallon of water near boiling. Then go over the inside of the house the same way. Miss no spot. Spray the empty nest-boxes the same way, and sprinkle them well with insecticide powder. Morning is a good time to do this work; then you can let the house ventilate all day, otherwise the odor of the solution may injure the birds at night. Give the inside of the house a whitewash of lime, to which three or four ounces of crude carbolic acid to each gallon has been added.

Keep the birds away from the clean house one or two days, applying each day good pyrethrum powder dusted on against the grain of the feathers and rubbed well in. On featherless parts apply kerosene or a ten-one mixture of olive-oil and oil of anise.

Sometimes it seems necessary to move the house to new ground, as the very earth may become infested. Be careful not to bring any fowl to your premises that has these fleas. If there are pigeons

toms, and any boards that lay near-by, though the boards had been well covered with ice or snow all winter.

But hot water will kill every germ and every mite, every time. This, with sulphuric acid, is my stanch remedy for disease-infested coops, brooders, and incubators. These last, if you did not give them an extra disinfection, are by this time getting in thoroughly unhealthy shape for the first hatching of spring chicks.

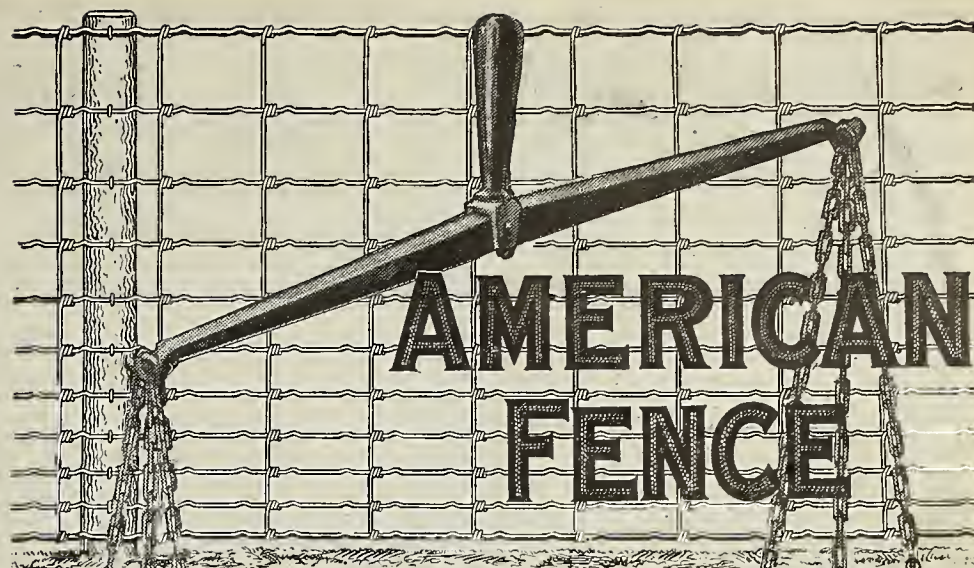
All of the brood-coops should be well scalded out before piling away for the winter—and I scald the ground upon which they stood. Before putting by the brooders I not only scour them out with hot water, but also disinfect all parts. An ounce of sulphuric acid to two gallons of water is the proportion I use. In cleaning the incubator I use a scrub-brush, and a ten-per-cent solution of some strong coal-tar disinfectant. I repeat this before eggs are put in to hatch, and between every hatch.

To keep down a dread typhlitis, or white diarrhea, as we have been taught to call it, the bane of the incubator chick, we must take every precaution. This of disinfection before putting away is one of the first and best. MARY SHEPLER.

Tuberculosis

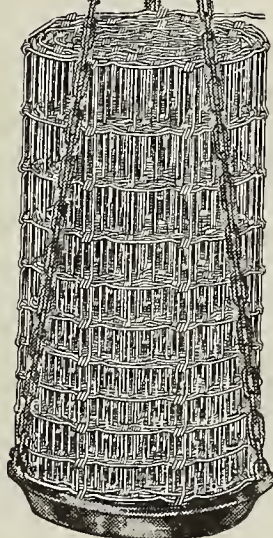
MRS. CHAS. SINCLAIR, of Indiana, writes: "My chickens had gapes very bad in the spring. Those that got over it, when they were about frying size, began to get so poor they could hardly get about. Finally I found one dead. Its lungs were full of something looking like fish-eggs. It had seemed hard for it to breathe."

By the data given I think your chickens have tuberculosis. This was probably helped by the weakened condition the chicks were left in after the gapes. Or it may be some other bacterial disease in chronic form. Under the circumstances there is nothing you can give them as a cure. Would advise you to kill all those that seem to be affected and in a weakly condition, thoroughly fumigate and whitewash your houses. It would be a very good plan to give the rest of your chicks a tonic in their drinking-water by using half a teaspoonful of tincture of iron chloride to each gallon of water. It saves risk when you have an ailing fowl around to kill it at once. A. E. V.

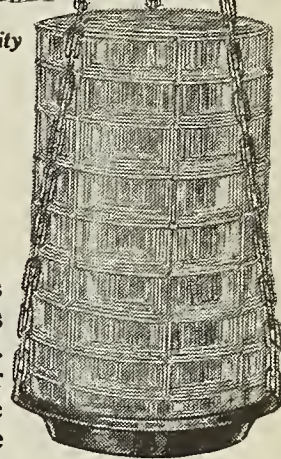


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Often a dairyman will raise all of his heifer-calves regardless of their breeding and individuality, while a neighbor will destroy all of his. How much better it would be if the very best calves in both herds could be raised, and all the poor ones killed. This idea is already being worked out in places where local cow-test associations are in operation. Through the results of these associations accurate knowledge of the dairy qualities of the ancestry of the calves is acquired.

I believe that the calf should be left with its mother three days, for three reasons: First, I think the cow has a right to her calf for the first few days; second, the fine dairy cow is highly nervous, and taking her calf away is liable to cause milk-fever; third, Nature has stored up in the udder of the cow a secretion called colostrum, which acts as a gentle purge and regulates the digestive system of the calf—it suckles small quantities frequently and gets a good start in life.

Inflammation of the udder is relieved by the calf sucking. It is important to see that the young calf does not over-eat, as this may cause "scouring" and derangement of its digestion. When its belly is distended, remove it from the cow and gently strip her until she is dry. I always let the calf have the first milk, and I do not strip the cow dry for the first twenty-four hours. If this method is practised there is little danger of milk-fever. In three days or as soon as the milk is fit for use, take the calf away. A sensible plan is to tie the calf where the cow can see it. Teach her that you are her friend and that you will not hurt her calf.

Do not think because it is an extra choice calf that it should have all it will eat. For three weeks I should feed the whole milk as it comes from the cow, at a temperature of ninety-eight degrees, three times a day and about two quarts to a feed, with somewhat less at noon. If a small calf, feed accordingly. After three weeks two feeds will do and the whole milk may be gradually changed to skim-milk.

Do not think because the milk has been skimmed that it is necessary to increase the amount. The protein in the milk forms a very important part of the ration. The separator removes the cream; but at the same time it condenses the protein. If the separator removes one quart of cream from five quarts of skim-milk, nearly all of the protein contained in the five quarts stays in the four quarts of skim-milk, which becomes richer in protein than the whole milk. We need to recognize this fact in feeding young calves or we will be quite apt to overfeed.

How to replace the carbohydrates in the cream is a problem for us to solve. I use oatmeal with the hulls sifted out and old process linseed-oil meal, although many feeders have excellent results with other calf foods. The calves should have some choice hay (alfalfa or clover preferable) within easy reach, and access to dry grain foods at all times. As soon as they will eat tiny bits of hay and grain there is little danger of their becoming deranged or off feed, with good management.

I feed dry grain foods immediately after the milk ration, because I find that it prevents the vicious habit of ear-sucking. Calves are not to blame for this habit, for fast eating does not allow the saliva to become mixed with their food and the calf immediately seeks something to relieve its mouth of the saliva. Keep the calves tied until they are old enough to eat dry grain; once they have learned to do that they are not likely to pick up the ear-sucking habit.

Icy water is one of the worst things that can be given the calf. Skim milk returned from the creamery, where it stands and chills and, possibly, is mixed with milk from diseased herds, is not to be compared with skim-milk separated at home and fed warm.

The pens and stables should be kept clean and the bedding changed every two or three days, so that they will not be compelled to lie on a damp bed or breathe the fumes from manure and urine under them. They need plenty of light and sunshine, for sunshine is a great stimulator and invigorator for all young animals. Do not turn them out to grass in the first warm weather. The very best calves are the ones that are kept inside

until after the grass has dried down a bit and then only allowed to graze for an hour or two a day until they have become used to the change.

I believe that the dairy heifers that will best meet the demands of the future are the ones that have been developed largely on a ration of forage and a small amount of home-grown grain foods. The price of all grain foods makes their exclusive use as a source of protein almost prohibitive, hence the desirability of having cows that are capable of making a more profitable use of such proteinaceous forage and fodders as clover and alfalfa in connection with properly prepared ensilage and a very small amount of good wholesome grain foods.

W. MILTON KELLY.

Why Butter Won't "Come"

DIFFICULTY is often experienced in making good butter in winter, especially from milk from a few cows. Change of feed, temperature and methods of handling milk and cream generally cause the trouble. There are frequent complaints that the butter is long in coming or that it foams and swells and won't "come" at all. Scarcely a farmer's institute passes, where butter-making is discussed, that troubles along this line are not brought up.

A better understanding of the principles of cream ripening and churning would help remedy these difficulties.

In the first place we now know that cream is ripened and the flavor produced by the development in the cream of certain bacteria. These bacteria enter it either by chance or by the addition of a "starter"—that is, a small portion of cream already containing them and kept for that purpose from one churning to another. It is not practical for the farmer with a few cows to bother with a commercial starter. Much of the trouble arises from the failure of these bacteria to properly develop. Either the development goes too far and the cream becomes too sour or it is not carried far enough.

Temperature and the length of time the cream stands are the controlling factors in the process. Often the cream-jar is kept in the kitchen while the churning is accumulating. This is a bad practice. The warmth of the room favors the development of the bacteria and ripening begins with the first cream put in. Then as subsequent additions are made we have cream in different stages of ripening.

The better way is to keep the cream at low temperature until the desired amount is collected, then remove to a warm place and add the starter. The cream will soon begin to sour, then to thicken; and when it has reached the stage where it begins to separate from the whey it is ready to churn, providing the temperature is not too high.

If the cream has been kept cold while gathering, the temperature for ripening may be as high as seventy-five degrees. But be careful not to set it so near the heat as to overheat any part of the vessel or you will have scalded butter. For security, every butter-maker should have a dairy thermometer; they cost only twenty-five or thirty cents.

After the cream is ripe, set it away to cool down to the proper temperature. In winter the best temperature for churning is between sixty and sixty-eight degrees; but experience alone will tell you the best temperature. The proper length of time for winter churning is thirty to forty minutes. Proceed with the churning until the grains of butter are about the size of wheat-grains. Draw off the butter-milk and throw in water four or five degrees warmer than the butter, drain off and repeat two or three times. Press out the water, add the salt and set away a short time; then work a second time, print or make into rolls.

When the cream foams and becomes frothy it is usually because it has been kept too long at too warm a temperature. Or it may be that it needs a good starter. In that case go to a creamery or a neighbor who churns oftener and who you know makes good butter, and get a pint or quart of ripened cream. Add this to your cream; stir it well and frequently, in a warm temperature, and it ought to give no trouble when you churn.

If it swells too much and will not come, the cream is usually too cold. Be careful in adding hot water. The better plan is to try it with a thermometer before you begin and have it right at first.

Cream from cows thin in flesh or with impoverished blood will not make as much or as good butter, as that from cows in good condition, nor will it churn as easily.

R. P. KESTER.

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FENCE

Live Stock and Dairy

"They's Money in Hogs"

WHEN I thought of the title of this article it brought up in my mind an incident that occurred some two years ago when I was on a hunting trip in southern Indiana.

The little boy at the house where I stopped had a pig bank. It was made of chinaware, and the slot for the coin was in the middle of the pig's back. The family were pretty frequent depositors and the pig was about full. One evening, when I was resting from a long day's hunt, he came over to where I was sitting and handed me the bank to "heft."

"They's money in hogs," he said proudly.

That there is more money made from hogs in the great corn belt of the central West than from any other stock cannot be doubted a little. It seems that hogs and corn were made to go together; yet they go together so often without anything else added that neither the feeder nor the hog is a success.

When we find a man making a first-rate success with hogs, on close knowledge of his methods we generally find some special reason for it. Oftentimes the reason lies in the way he shelters his

a fresh-air, sanitary basis. We have a neighbor who has not had the hog cholera on his place for thirty years, maybe longer. His hogs get the fresh-air treatment—really too much of it—but one can buy good feeders from him every year, great-boned fellows that take on fat like magic.

The hog-quarters should be rotated as regularly as the field crops. Then you are continually chasing disease, instead of going into partnership with it.

OMER R. ABRAHAM.

Result of Rough Driving

A NEBRASKA farmer asks the nature and cure an udder difficulty that causes one of his cows to give bloody milk.

There can be little doubt but that the entire trouble with the cow in question is the result of her having been run to and from the pasture by the dog. Such troubles are very difficult to cure because it is almost impossible to successfully apply treatment directly to the seat of trouble, which is inside of the udder.

The most practical and advisable treatment is to bathe or massage the udder thirty minutes at a time, twice daily, with hot water and keep the udder milked dry.



The A-Shaped Movable Hog-House—Cheapest, Simplest and, in Many Ways, Best

hogs. By this I do not mean that it is the man with the fancy buildings that is always the successful hog-raiser; some of the most successful hogmen I have known used little shacks, scattered in convenient places. They didn't use hog medicine and patent feeds to a great extent, either. What was the secret of their success then?

Well! to begin with, the hogs were never bunched much, except when they were being "fed out." The sleeping-quarters were airy, naturally such shacks always are, thus there was little danger of the hogs coming out to their meals steaming hot, and cooling off too quick, which is always followed by "that cough," and often worse results. Then, too, a shack only lasts a few years, sometimes only a season, so that the bedding-places, and often the eating-quarters, are continually on the move, just like rotation of crops to dodge the insects and fungus. Nice, comfortable, substantial buildings are a

Place the cow in a convenient stall and milk the affected quarters dry five or six times a day and oftener if possible. By keeping the udder free from the bloody milk and by persistently rubbing with hot applications, a normal condition should result within a week or ten days.

Of course, it is understood that the cow must be handled carefully, kept in a warm, dry and well-bedded stall, and not subjected to excitement and cruel treatment from her attendants. There is no manner by which good cows can be so quickly and so surely ruined as by allowing them to be chased by dogs.

HUGH G. VAN PELT.

Mid-Winter Dairy Dottings

Cleanliness is cheap, but it is worth a lot.

Irregular milking-hours bring an irregular milk-flow.



Another Type of House—More Finished, But Harder to Shift

big help in successful hog-raising, if only the manager will keep things on the "shove." That means frequent cleaning out of litter, cobs, manure, etc., and a liberal use of disinfectants; but how many farmers in the rush of farm work do this? Only about one in every twenty-five; the other twenty-four let filth accumulate and breed disease. For such farmers, the old-style fresh-air way is often better.

When cholera gets "hankered" around a place it usually returns or livens up to activity each season about "cholera time." Many a well-equipped farm, where hogs are a very important crop, is put partially out of business every year in that way. The very soil around the feeding-lots seems to be inoculated with the germs. A move is necessary; the entire former hog-feeding area should be put to crops, and hogs should not set foot on it. On another part of the farm the new "hog premises" should be started, on

Cold-air exercise is preferable to continued warm-air inaction in the dairy stall.

Mr. Dairyman, your cows must breathe pure, fresh air in winter the same as in summer. Ventilate!

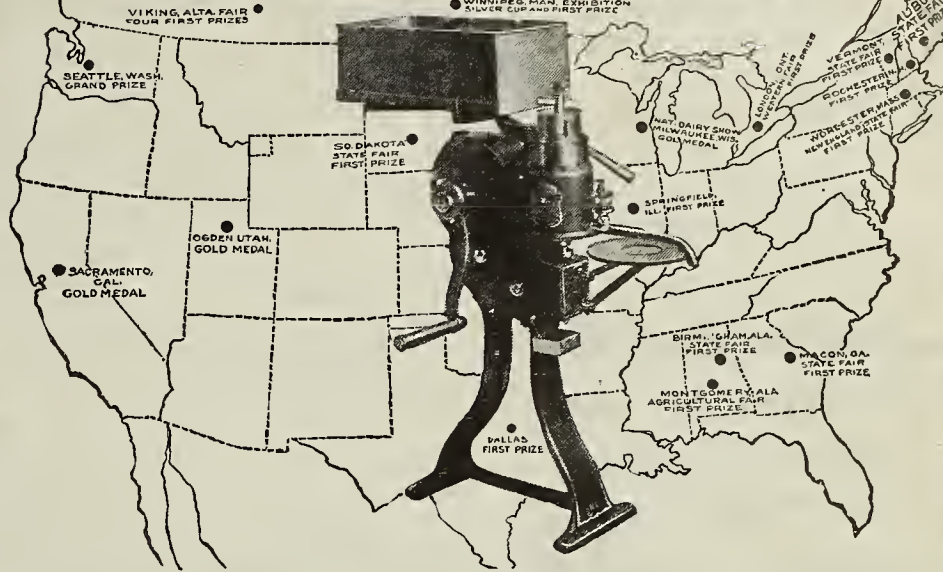
Kind treatment of the dairy cows is as "bread cast upon the waters," and quickly returns to the kind dairyman in the shape of a well-filled milk-pail.

When you see a man chopping a hole through the ice for his milch-cows to drink ice-water out of, you can be sure he is cutting a big hole in his dairy profits.

As good wood makes the hearth-stone glow,
And keeps the fire a-going;
So kindness, care and feed, we know,
Will keep the milk a-flowing.

M. A. COVERDELL.

From COAST to COAST and BAY to GULF



United States Separators and their Products

Win All Important Awards in 1909

IN keeping with its usual successes and accomplishments, the year 1909 has been another record-breaker for the United States Cream Separator. The few awards we mention are far from all. These are a few of the more important ones.

THE GRAND PRIZE (Highest Award) on Separators at the **ALASKA-YUKON-PACIFIC EXPOSITION, Seattle**, awarded the U. S. This was positively the highest award received by any separator.

GOLD MEDAL (Highest Award) on Separators at the **Intermountain Four State Fair, Ogden, Utah**, awarded the U. S.

Butter made from U. S. Cream by Jas. H. Toomer, Morgan, Utah, also won **First Prize and Gold Medal** at this Fair.

GOLD MEDAL (Highest Award) on Separators at the **Sacramento, Cal., State Fair**, was awarded the U. S. Separator.

FIRST PRIZE (Highest Award) on Separators at the **Texas State Fair, Dallas**, awarded the U. S. Separator.

FIRST PRIZE (Highest Award) on Separators at the **State Fair, Birmingham, Alabama**, awarded the U. S.

FIRST PRIZE also **STANDARD SILVER CUP** (valued at \$100.00) was won by Mrs. Alex. Simpson, of Atwood, Ontario, at the **Winnipeg Industrial Exposition**. Mrs. Simpson has used a U. S. Separator for years and has always been a prize winner on butter.

FIRST PRIZES (Highest Awards) at the great **New England Fair, Worcester, Mass.**, were awarded to Harry C. Shepard, of Sturbridge, Mass., on Dairy Butter and Gloverdale Creamery, Tunbridge, Vt., on Creamery Butter. Both U. S. users.

THE GOLD MEDAL (Highest Award) at the **NATIONAL DAIRY SHOW** recently held at **Milwaukee, Wis.**, was awarded to J. Gilbert Hickcox, of Whitefish Bay, Wis., on Market Cream obtained by the U. S.

FIRST PRIZE (Highest Award) at the **Illinois State Fair, Springfield**, on Dairy Print Butter, was won by Robert Moren, Morrison, Ill., a user of the U. S.

FIRST PRIZE (Highest Award) at the **Vermont State Fair, White River Junction**, was awarded L. R. Dana, Pomfret, Vt., on Dairy Butter. Mr. Dana also uses a U. S. Separator.

FIRST PRIZE (Highest Award) at the **Maine State Fair** on Dairy Tub Butter was won by Mrs. L. S. Brimmer, of Tilden, Me., user of a U. S. Separator.

FIRST PRIZE (Highest Award) **South Dakota State Fair**, on Dairy Butter won by Mrs. M. F. Andrews, of Huron, a U. S. user.

FIRST PRIZE (Highest Award) on Home Dairy Butter, **Western Fair, London, Ontario**, awarded Mrs. Alex. Simpson, Atwood, Ont., a U. S. user.

FOUR FIRST PRIZES, **Viking Agricultural Fair, Viking, Alberta, Canada, Oct. 5th, 1909**. Dairy Butter, Mrs. S. Stenberg, swept all four First Prizes. Another Great Victory for the United States.

FIRST PRIZE, **Georgia State Fair, Macon, Ga., October 27th to November 6th, 1909**. First Premium on both **Separator and Exhibit**, awarded to **United States Separator**.

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W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

Live Stock and Dairy

How to Spoil a Colt

HAVING been brought up on one of the large farm estates in the old country, where twelve to fifteen teams of the horse-kind and the same number of ox-teams were the regular daily working forces. On coming to this country I was assigned by the farmer for whom I worked to take charge of his team and a number of colts. In this way I had formed, at a rather early date, a pretty thorough idea of the rights and wrongs of colt handling.

One day, when passing a farmer's barnyard, I noticed a young horse in the inclosure that showed plain signs of distress. It was harnessed with a rigging similar to a single harness called, as I afterward learned, a biting-rig, and from the animal's action I knew, although I had never seen anything like it before, that it was suffering some unnatural treatment. The poor animal would walk ahead a few steps, then back and twist around, strike the ground with one foot, then with the other, back against the fence and try to rub its head against the top rail, until at last it threw itself flat on the ground. But it did not remain there long; after kicking and pawing a few minutes it got up again and resumed its former display of despair.

By this time I was by its side and on examination found that by the use of the common check-rein its head was drawn up as high as old horses are generally checked; a pair of tie straps were buckled into the bit-rings, then passed through the thill-holder and tied into the breeching rings at the sides. Thus, the animal's head was held as in a vise; the check-rein kept it up and the side straps held it down.

It did not take me long to hunt up the owner; he was a man sixty or sixty-five years old, and when I tried to remonstrate with him in behalf of his colt's sufferings he looked at me with a good deal of condescension and said, "Oh, well, he has to be broken; he will be all right when he gives up." When I questioned him in regard to the time he intended to keep his colt in that condition, he added, "Two or three days, maybe a week—anyhow, until he gives up."

How senseless; how cruel. Any person found guilty of torturing a dumb beast in such an unmerciful way deserves a prosecution for cruelty to animals. Just think a moment. A colt, two or three years old, is in his natural, unbroken state. By the application of that detestable rig his head is forced into a position it probably never occupied be-

fore. Soon the muscles of his head and neck begin to tire; the tired feeling increases to a pain; his struggles give him no relief until the poor creature, frantic with pain, throws himself. Thus his owner leaves him, not only for a short time, but for hours and days with hardly intermission enough to let him take his regular meals. That was the old farmer's way of "breaking colts," and he considered himself a good horseman.

Another case of mismanagement came under my observation about the same time. I met a neighbor going to market, a distance of about five miles. He had something like half a load of grain on his lumber-wagon and instead of his usual road-team of old horses he had a three-year-old colt in place of one of them. He said that his colt had been hitched up only a few times, and "to give him a little exercise," he thought he would go to market with him. Inexperienced as I was at that time, I knew that the strength and general constitution of his colt was greatly overtaxed by the task he expected of him, and when I hinted to him this fact, he said, "No, no, I've got the old mare chained back, and when he gets tired he can fall back and the old mare will take the load all herself."

Let us look at the theory of this "chaining the old mare back" from a commonsense standpoint. That neighbor said, "When he gets tired he can fall back." If he has the disposition to fall back, he takes a lesson in balkiness every time he does it. In after life, whenever things don't come up to suit his taste, he will remember the old mare's chain and—balk. It is a great mistake to give the young colt a chance to shirk. Make him responsible for his share at all times, but make his share so easy that he will never think of shirking or getting tired. Let his physical work be so gradual that he will never know when he began it.

On the other hand, if the young colt is ambitious he will exert himself beyond his strength. He has not the judgment to let the old mare's chain do part of his work when he is tired, and a colt is in the most susceptible condition when overtaxed to contract such ailments as sweeny, spavin, wind-galls, splint, etc., which may justly be termed "colt's afflictions."

Before closing this article I wish to mention another case of brutally abusing dumb animals, which very lately came under my observation. A certain driver has the inhuman habit of jerking his horses' bits. He is a strong, double-fisted young fellow, weighing nearly two

hundred pounds, and on the least provocation, real or imaginary, he jerks the reins of his horses with all the force of his powerful physique. Frequently he has snapped the reins like so much wrapping-twine.

The surprising feature of this affair is this: The owner of the team would witness this cruel treatment of his stock and say nothing, not even to caution his hired man to be more charitable toward the poor animals. G. C. GREINER.

Essentials for Dairy Profit

THIS is the season when dairy profits are largest if care and feed are properly attended to. Handling dairy cows means far more than simply having a place to turn them into and enough feed to keep them going.

For the average farmer, the feeding of clover, alfalfa, with the addition of plenty of good, sweet corn-silage and perhaps a little corn is about as near an ideal feed as possible. Wherever clover will grow successfully, it ought to be fed to dairy cows, and in fact almost all animals, quite freely. The benefit to the soil from clover should never be lost sight of when taking into account the value of growing it.

The soil must be kept up to a high state of fertility in order to grow large crops of dairy feeds, such as corn-silage, and clover gives the chance for a good dairy-farm rotation.

If neither clover nor alfalfa hay is available, it is usually profitable to feed cow-pea hay, which is a good substitute for the clovers and will grow on soils that will not grow clover.

I think, however, that nothing can be grown that will provide so much feed as corn when put into the silo. The nutrients furnished are not all the story. In addition to its succulence it is very beneficial to the digestion of the cows, being almost equal to June pasture.

For a dry fodder-and-grain ration there is nothing that will beat clover, and corn for dairy cows. When silage from well-grown corn is freely fed, it is not necessary to have corn in the ration, but I always use some clover-hay in addition to the silage.

A prime consideration is clean, airy, comfortable quarters. Cows must be contented if they are to turn in the largest profit. This providing for the animals' comfort I would give first importance. Next I should consider the feeding. The animal should be supplied with rations that are suitable for the production of an abundance of milk and at the same time will keep them in perfect health, without which they cannot produce good milk, nor a profitable quantity of it. The third consideration, I think, is the management of the cows. They should be handled quietly and kindly, otherwise they will not return a profit. I have found much depends on the character of the man in charge of the herd.

All these three considerations must be well looked to; and when the cows are cared for in this way they will, if they are the right kind, pay back their owner handsomely. R. B. RUSHING.

"Freemartins"

A HEIFER that is twinned with a bull is termed a "freemartin," and will very seldom breed. In a few cases, however, this rule has been found not to hold good, and in these cases it has invariably been observed that the heifer was very feminine in appearance. This leads to the common statement that if the heifer is quite feminine in her looks and make-up there is a bare chance that she will conceive, but if she is inclined toward coarseness and shows some of the masculine characteristics there can be very little hope that she will ever reproduce offspring.

If both twins are heifers they will breed as a rule. In the former case the male is more liable to breed than is the female, and in case both twins are males there is little reason to doubt their value as breeders. When a heifer twinned with a bull is saved for breeding purposes it is always advisable to breed her comparatively young, before she has developed undue coarseness.

HUGH G. VAN PELT.

Wanted

ONE of the latest services of science to the farmer has been the discovery of a vaccine to be used in protective inoculation against hog cholera. If any of our readers have tried it we would like to give our other readers the benefit of their experience. We will be glad to pay for good letters.

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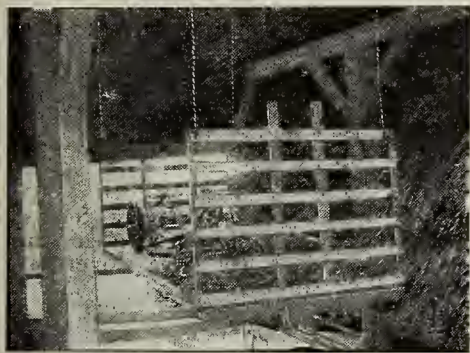
Farm Notes

Space-Saving Schemes

With the price of building-material in the clouds and prospects of its going higher, the practical farmer is learning to be economical with the sheltered space his buildings afford. By a little close figuring, a lot of machinery might be brought indoors which now is rusting outside because there seems to be no place for it.

When winter approaches, it is time for the farmer who is a little "shy" of building room to begin to scratch his head and see if he has made use of every bit of available shelter. Perhaps a tool or so might be hoisted into the hay-mow since it has settled and, even though it is necessary to shift them occasionally, it will be worth while. By the use of a couple of poles and some material from the board-pile, a loft may be made in the wagon-shed or granary in which a few of the smaller tools may find shelter. In the same way a portion of the vacant space above the driveway in the barn may be utilized. By taking the larger machinery apart and using a rope and pulleys, the smaller portions may be hoisted and stored in nooks and corners otherwise unavailable. All this of course requires time, but it's time well spent.

We have a combined granary and wagon-shed, in one end of which we constructed a loft, while to the rafters of the other end a number of hooks were attached. These two places come very handy for storage of the minor articles of the farming-kit—the more bulky articles being placed in the loft, and the smaller ones hung on the hooks. Many articles which are used only a short time



The Handy Hanging Wagon-Rack

each year, as hand planters, binder canvases, barrels, etc., may be stored in this way, thus leaving the floor space which they would require free for other purposes.

The photograph shows one way in which we utilize a portion of the vacant space above the barn driveway. The rack is lifted from the wagon by a rope and pulleys. It not only secures shelter itself, but serves as a hanging floor on which to stow other farm implements.

P. C. GROSE.

Winter Manuring

SOME farmers condemn the practice of spreading stable manure on frozen land as wasteful and extravagant. Other prosperous men are enthusiastic in their praise of winter manuring. This difference of opinion is based partly, but not altogether, on experience obtained under different conditions.

I believe that the opinion that this method is wasteful is usually based on prejudice only.

Manure drawn out and spread from day to day in winter, on grass-lands especially, I have found beneficial. It retards the melting of the snow, protects from the cold winds and as the snow melts its juices are carried down to the roots, which hastens the growth of the grass. In the summer this manure protects the roots from the sun, and through increased growth of the top and the roots the humus in the soil is increased and the productiveness of the soil benefited.

The best results, from winter spreading of manure will probably be obtained from grass-land. The next best place I have found is land where I intend to plow and plant corn next year. In such cases I always plow very early in the spring to bury the long manure while unfrozen. This has not proved the best plan in every case, especially on very leachy soil and a moist season. When manure is spread on a side hill in the winter, there will necessarily be some loss, but less than is usually supposed.

It is difficult in some instances to do this work in winter, owing to soft ground or deep snow. Or the manure may be so frozen as to interfere with the use of the spreader, the tool which distributes

it so much more evenly than it can be done by hand.

But by watching for the favorable opportunity, it is usually possible to spread most, if not all, of it. When we cannot spread it, what shall we do about it? How shall we keep it? This will depend on conditions. During a dry time it may be thrown out almost anywhere for a few weeks without much loss. When there is much rain, the farmer who is thus careless with his manure may lose one half the value of the pile by leaching. I think the better way is to keep it under cover when it can't be drawn out at once, and if packed firmly by tramping or driving over it, the loss of the most valuable element, the nitrogen, will be much less than if piled up under cover loosely.

There is some manure that has so much litter in it that exposure to the elements in a yard is an advantage, as it hastens decay. I have found that the manure made in sheds is of high quality, because the litter spread from day to day as it accumulates absorbs the liquids that fall upon it. R. B. RUSHING.

Don't Hibernate

THE farmer who can keep some sort of profitable work moving along during the winter months is more apt to increase his bank balance than the one who roasts his shins by the fire all winter.

In some localities the farmer can realize a neat sum by hunting and trapping fur-fearing animals during spare time in the winter, and at the same time rid the neighborhood of those pests which prey on the chicken-coop.

There is seldom a farm the country through that hasn't a brushy nook or corner which might be cleared off during the winter and transformed into a profitable field or pasture. The brushy fence-row is another quite common waste space where winter work could be applied very advantageously.

The operation of a sawmill in any fair-sized wood-lot during the winter will turn the timber into almost clear profits in the shape of lumber and fuel which, when not consumed or used about the farm, find a ready and profitable market. In addition to this, the ground thus cleared may be broken the following spring for pasture or crop.

Then there are numerous odd winter jobs which the farmer will find total up good profits. All the machinery may be inspected, every missing bolt supplied and the bearings oiled. This will save precious time in the spring. Keeping up the tools will also prove a time and labor saver. One can even install a small set of blacksmith tools and clean up all repairs on the machinery that would have to be taken to town in the spring to be put in running shape.

Last, but a long way from least, is the too generally omitted work of seed-testing. The germination test should be part of every corn-grower's winter routine.

These things, together with other work that circumstances may place in the farmer's way, ought to make the profits of the winter months measure right up with those of any other season of the year. M. ALBERTUS COVERDELL.

Paint is Cheaper Than Rust

HERE on Valley View Farm we have made trials of several different roofing-materials, and have had particularly useful experience with steel roofs.

Corrugated "galvanized iron" roofing is enduring stuff; some roofs in this vicinity that have been on for several years show no signs of deterioration. It is cheapest in the end, even though it costs considerably more than the ungalvanized kind. Painted steel roofing, however, does not give the satisfaction that it should. It is supposed to be painted, but many places on it will gather rust the first dew that falls on it. If you do use the ungalvanized steel roofing, the safest way is to paint it yourself. A few years ago we put up several outbuildings and roofed them with steel on account of the ease of handling it. I wanted to paint it both sides before putting it on, but my father, who was the "boss" of the farm, figured that it would not be worth the time, for we could paint it easier after it was on.

The consequence was it rusted worse on the under side than on the outside, and soon rusted through, in spite of new paintings on the outside. Therefore, I would say never put on "painted" roofing without giving it a good coat of paint on the under side; let it dry thoroughly before putting it on.

OMER R. ABRAHAM.

Read how two men make \$12,000 a year raising eggs.

country, and a business that, with 1953 hens, paid last year a clear profit of more than twelve thousand dollars.

When the publishers of the FARM JOURNAL learned what these two inexperienced men had actually done, they decided at once that their subscribers should know all about an operation so important. They saw that any one with "gumption" could raise eggs by Corning methods, which had succeeded both on a small and on a large scale. So these practical egg-raisers were induced to describe their experiences and methods fully in the

CORNING EGG-BOOK

(entitled "\$6.41 per Hen per Year") which tells just HOW they made their splendid success. It will interest every one who wants a safe, paying business, that can be built up without large capital or long training, and also the million families who need plenty of fresh eggs for table use. There is a



great demand in all cities for "near-by, selected fancy eggs," and the few who can furnish an **unfailing supply**, winter and summer, get very high prices. This is one of the most precious of the Cornings' secrets. The book tells the whole story,—where they find their market, why they raise only white-shelled, sterile eggs, how they keep hens laying regularly in winter, when they hatch chicks that are to do their best work in December and January, how to mix the feed that produces the most eggs, how to prevent losses, how they found the best breed for egg-producing, and how their whole system works to that one end—eggs, EGGS, EGGS. It gives photographs of their plant and complete working plans of their buildings, which can be made in sections, large or small, as needed.

Next year the Cornings expect to have **twice** as many hens,—that is, 4000. Will they make twice \$12,000? Take the FARM JOURNAL and find out.

The FARM JOURNAL publishers believe that thousands of readers of this paper will want to learn how two novices could in four years make egg-raising pay a profit of \$12,000 a year; so they have arranged to sell the **Corning Egg-Book** in combination with

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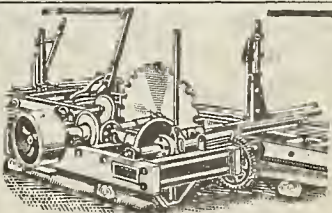
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Senator Dolliver, of Iowa, says:
"The stream of emigrants from the United States
to Canada will continue."

Senator Dolliver recently paid a visit to
Western Canada, and says: "There
is a land hunger in the hearts of
English speaking people; this will
account for the removal of so many
Iowa farmers to Canada. Our people
are pleased with its govern-
ment and the excellent adminis-
tration of law, and they are com-
ing to you in tens of thousands,
and they are still coming."

Iowa contributed largely to the
70,000 American farmers who made
Canada their home during 1909. Field
crop returns alone during year added
to the wealth of the country close to
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Around the Farm

The Time to Plow Down Clover

A FARMER at Navaire, Ohio, writes:
"Should clover be mowed to dry
before plowing under; in general,
what is the best stage of its growth to
plow it under for a soil-enricher?"

I am always glad to know that more
farmers are getting in the notion of
plowing under clover. It is a practice
I have followed on my own farm for
several years, always plowing under
clover or at least some catch-crop legume
before wheat. Sometimes, however, when
I have a catch crop of cow-peas I do
not turn them under, but just harrow the
ground well and drill the wheat. But
back to the point.

The best stage of plowing under
clover, in my judgment, is just about the
time that one third of the heads are ripe
enough for seed. Our object is to add
material for the making of humus and
put nitrogen into the soil. Clover
adds no element to the soil except nitro-
gen, and is as a matter of fact a heavy
feeder on potash and phosphorus. Just
at the time of ripening the clover-plant
makes a heavy draft on the soil of these
latter elements. I can't see any prac-
tical reason for letting the seed fully
mature and make this extra draft from
the soil. If we plow it under at this
stage we are simply returning the same
things back to the soil, with perhaps some
loss, owing to parts of the plant shred-
ding away in the wind. On the other
hand, to plow the clover under while yet
in bloom or before the seed begins to
ripen is likely to sour the soil, and clover
does not thrive well on a sour soil.

Just at the time when one third or
one half of the seed is ripe, however,
the clover-plant is at the stage to give
us all the humus and nitrogen possible,
without wasting these other elements. It
has made its best growth, in fact has
stopped growing for that crop, and is
only drawing checks on the bank of
potash and phosphorus for the matur-
ing of the seed. My object of letting a
few of the seed get ripe is in order to
have the land seeded back after the
wheat. At this stage enough seed is ripe
to do this, and the plant is in a good
condition to begin at once to decompose
and at the same time is not green
enough to sour the soil to amount to any-
thing. In case this plowing cannot be
done just at this stage, I would mow the
crop then, and plow it under later, not
allowing that latter draft to take place in
the soil.

Sometimes, however, when the seed
crop is good, there is profit in letting the
crop mature, hulling the seed and re-
turning the hullings back and spreading
lightly, following with plow so as to save
it all. The seed crop in such case will
justify the extra draft on the soil, and
by returning all the hullings, practically
all of the nitrogen is fed back to the soil
in an available form, or nearly so.

In the special case of the inquirer I
believe it would be more profitable for
him to plow the clover under when the
seed is about one third ripe, as he states
that his land is rather upland and also
somewhat thin. In such case I am sure
that the soil will be greatly benefited,
both physically and commercially.

R. B. RUSHING.

Bigger Yields From Fewer Acres

IT is remarkable what great crops can
be grown on land that is given inten-
sive care. I was once talking to a farmer
about the quantity of grain required for
a certain number of stock, and he said
he would have to grow about two hun-
dred and fifty bushels of oats the follow-
ing year for his horses and fowls. He
added: "I will have to sow about three
acres to get that quantity. I grew two
acres last year and they made a hun-
dred and seventy bushels, but that was
not quite enough for me."

"I asked him how he managed to ob-
tain such yields, and he said he always
prepared his land as if he were going to
grow onions, then drilled the seed in.
He said most of his neighbors usually
obtained a yield of twenty-five to forty
bushels an acre. "But," said he, "they
have more land than I have and can af-
ford to spread wider. I have to make
my land yield full crops, or I would be
out. I buy my seed-oats from a farmer
in Wisconsin, because northern-grown
oats do better here in central Illinois
than any others, and the man I buy from
grows first-class oats. I get them in as
early as I can get the soil into right con-
dition, and have made only one poor crop
in eleven years. If my neighbors would

do as I do, they would have good yields,
too, but they won't. Most of them seem
to think that any sort of tilling will do
for oats, so they get them sown tolerably
early, and most of them covered. If the
season turns out just right, they get fair
yields, if not, they don't. They manage
their oats-crop much like some women
make bread. These women put the in-
gredients together in a sort of a guessing
way, and hope they will have good luck.
If they happen to hit it pretty near right
they have good bread. If they happen to
miss it considerably they have poor bread.
All the members of the family hope they
will hit it right each time they tackle the
job. If 'luck' is against them, they are
sad as the bread. If the batch turns out
well they rejoice and feed up. My neigh-
bors do not force their land to yield a
good crop, they hope it will. But it
won't!"

A short time ago I saw a man sitting
on a load of very fine corn waiting for
a couple of teams to get off the dump.
I asked him how much it yielded an acre.
"Right at ninety bushels," said he. "How
many acres have you?" I asked. "Ten,"
he replied. Then in a few words he
stated that he had only forty acres of
land, but he aimed to make it yield full
crops. He said he had not yet reached a
hundred bushels an acre, but expected to.
He had increased the yield from an aver-
age of about forty to ninety in four
years, and he saw no reason why he
could not soon reach a hundred. He
said he was satisfied that any good land,
properly managed, had a hundred in
every acre, and that it could be gotten
out. Said he, "You don't know the
capabilities of well-managed soil until
you give it that sort of management.
It is full yields, not many acres, that
count for profit!" He is right.

FRED GRUNDY.

Own a Bit of the Earth

I HAVE always wondered why more
young men do not make an effort to
own land. Many of them, when they get
a few hundred dollars ahead, put their
money in a team and buggy and fine
clothes, when they might put the same
money in land that would mean indepen-
dence in a few years. I do not mean to
censure them for so doing, because this
is too common a custom of the young
men of this age. I thought when I was
growing up the best investment for a
young man was a fine horse and a shin-
ing new buggy. If some one had
whispered in my ear, "The thing for you
to do is to take the several hundred dol-
lars you have saved and invest it in
cheap land somewhere," I would be much
better off to-day and better equipped to
make the battle for bread. I want to
help the young men to avoid the mistake
I made.

Now, here is my advice. If you can
get together as much as four or five hun-
dred dollars, invest it in land somewhere,
even if you have to buy a small tract or
borrow money to pay for a larger. I
am certain you will not regret it. Why?
Because land is advancing in price every-
where. The advance will make you good
interest on your money, and if you can
rent the land for something you will be
that much ahead.

Then, too, you will have a definite ob-
ject to save for. You will not throw
your wages to the wind or spend them
carelessly. You will be saving for a
purpose. Soon you will have put away
enough to pay for your farm, and inde-
pendence will be yours. Several years
ago I got together five hundred dollars
I had saved by rigid economy. I went
into the western part of a Western state
and bought a quarter section of raw
level land for eleven hundred dollars,
going in debt for six hundred. In two
years I had paid for that land, and as
it is practically in the rain belt I had
eighty acres of it cropped this year. It
will bring me about two dollars an acre
rent. The land has increased in value
more than one fourth since I bought it.
I feel that I made a good investment.
Others have had as good opportunities,
and they may think about them with
rather serious feelings when land goes
up beyond the reach of their pocket-
books.

Again, land is something that cannot
fail you. Mines may be exhausted, stocks
and bonds depreciate in value, banks fail
and oil-wells refuse to give forth their
treasures, but the land you buy remains
and produces and grows in value.

Lastly, the farm-owner enjoys an inde-
pendence that makes well worth while
the work and saving necessary to attain
it. While the man on the farm must
work, he is not bound by society or the
business world. He does not have to

rub elbows with a fellow unless he
wishes. In God's out of doors with birds
and bees and flowers and flocks and herds
and growing crops he can breathe the
pure air of independence and rejoice for
a little spot he can call his own in this
great world.

W. D. NEALE.

"A Place for Everything"

RECENTLY I stepped into a farmer's
barn and looked about. The harness
were thrown on the hall floor in a prom-
iscuous heap. The saddles were over
in a corner, and I noticed the mice had
been working on them. A curry-comb and
brush and three horse-blankets lay near-
by. The hallway seemed to be a general
"catch all." I even noticed a hatchet
and saw lying loose, and several halters
were stretched across the floor.

The owner of all this material was as
slovenly with his farming as with his
barn. There was no air of prosperity
about his place.

A short time afterward I was in the
barn that belonged to this man's neigh-
bor, and it showed a different view. The
owner seemed to have a place for every-
thing. In the hallway were the harness,
but each set hung on its own peg. A box
near the stalls contained brush and curry-
comb. At one end of the hallway I
found a miniature workshop and bench,
and every tool was in its place. Horse-
covers and halters hung on nails in their
corners, and everything about had the
appearance of neatness. Needless to say,
it was a prosperous, up-to-date farmer
who owned this barn. Everything about
the place showed the touch of his skilled
hand.

You shall know the farmer by his
works. Order and system save him time
and money. Everything about his barn
should have its place, and whenever not
in use there it ought to be found.

W. D. N.

Another Way to Pack Pork

ONE would think from the article in the
December 10th FARM AND FIRESIDE
that curing hams and bacon was a lost
art among American farmers. While I
do not think that is the case, there is a
great deal of difference in the success
that different men have with it. The
following has given me the best results
of any method I ever tried, and every one
who eats ham cured this way declares
it the most delicious they ever tasted.

Put the fresh hams and shoulders in a
barrel or jar, using plenty of salt under,
between and over them. Let them re-
main forty-eight hours, then pour on
water to cover them and leave them in
this brine forty-eight hours. Then re-
move, rinse and smoke thoroughly with
corn-cobs.

FRANK JONES.

Agricultural News-Notes

Bradford, England, is now the largest
wool center in the world. In 1907 about
four hundred and forty-eight million
pounds were imported, the value of which
was estimated at over one hundred and
seven million dollars.

The agricultural college at Fort Col-
lins, Colorado, is experimenting in the
line of breeding a pure strain of Ameri-
can carriage-horses. The combination is
that of Rysdik's Hambletonian, Justin
Morgan and the English Thoroughbred
as represented in the best type of Ameri-
can saddle-horses.

As farmers are becoming more inde-
pendent each year, there is less need of
their selling their principal crops as soon
as harvested. The selling period is there-
fore being extended over several months.
This is likely to prove more advantageous
to farmers, millers and consumers than
to speculators in grain.

Secretary Wilson says there is more
need now than ever before for the rigid
inspection of imported plants in order to
prevent the introduction of injurious in-
sects, such as the brown-tail moth and
many others. A few hundred dollars
wisely expended now will save millions
of dollars of expense, which will other-
wise have to be expended for their de-
struction.

After six years of special investigations
by G. H. Powell, of the United States
Department of Agriculture, and the
hearty coöperation of the orange-grow-
ers of California, the decay in shipping
has been prevented by the discovery of
the pre-cooling method, so that the loss
of at least one million dollars annually,
which was the case when the investiga-
tions were begun, has been almost wholly
prevented.

Farm Notes

The Why of Machinery Buying

WE LIVE in an age of machinery and the consequent reduction in cost of production in large measure determines the profit from the farm, as well as from the mill and factory. It is good economy to have enough machinery to turn the work off at the proper time without delays, and to have that machinery of best quality, for a poor machine usually breaks just when it is most needed and entails a loss of time and money. It is poor economy to use a machine that is merely a convenience; it can only be classed as a luxury.

The cleaning of fields by removing stumps, stones and useless trees should precede the introduction of costly machinery, that the breakage and wear may be reduced to a minimum. A little determination and the employment of a few spare hours will often enable us to remove obstructions that have hindered cultivation for years.

We need to give more study to the question of farm implements and their adaptability to the types of soil on our farms. Too many farmers depend on the recommendations of agents and manufacturers without really getting down to the principles of the thing. In buying implements of tillage and cultivation we should keep in mind the fact that tillage develops plant-food as well as destroys weeds. In discussing this question I am going to try and treat it from this standpoint and endeavor to explain the fundamental principles that are involved in proper tillage.

Good plowing is the foundation of proper working of the soil. Right here I wish to suggest that we make a mistake when we buy a plow constructed to give exceedingly easy draft. This is the recommendation that comes from most plow agents and manufacturers, and it is from that standpoint more largely than from any other that most farmers select a plow. I do not look upon this as a correct principle. I believe that the value of a plow or any other farm implement consists in its doing the thing we want it to do.

In comparing the work of the two types of plows we invariably find that the plow with a heavier draft goes through the soil and not only breaks it and turns a furrow, but in the process it grinds and pulverizes the soil into fine particles. The other simply cuts and turns the furrow over with the least resistance resulting in very smooth work to look upon, but its effect upon the soil is not nearly as valuable as that of the plow that runs harder and gives more resistance to the soil, and breaks it up finer.

The more thoroughly the soil is broken up, the more plant-food is made available, and plant-food is what we are after. So when we purchase plows we want to study their construction with that in mind.

The same consideration should be given to the selection of harrows. I would by no means purchase a harrow because it was a light-running implement. To do efficient work and move the soil to considerable depths requires plenty of horsepower. Another point to be considered in selecting harrows is that of doing smooth work and incorporating the vegetable matter with the soil uniformly. The function of the harrow is to still further reduce and refine the soil particles, because in every process of refinement we are getting at the plant-food which is still so abundant in all our soil. On the average farm where there are various types of soil a disk harrow, a spring-tooth harrow and a smoothing harrow are practical necessities. There is poor excuse for farmers to spend money in the purchase of commercial fertilizers or chemical plant-foods until they have first made use of that which is so abundant under their feet. I am a firm believer in the use of fertilizers, but not until we have made available the most that it is possible within reach of our own labor.

In purchasing cultivators we should pay particular attention to their power of destroying weeds and conserving moisture; but we should still keep in view the object we had in the purchase of the plow and the harrows—the developing of plant-food—because in every stirring of the soil we make available more plant-food for the growing crop.

First then, we want a cultivator that will refine the soil particles and stir the soil thoroughly as deep as possible during the early portion of the season, both to develop plenty of available plant-food and to destroy the weeds; but as the season advances and the danger from droughts intensifies we must consider the

principles that control the moisture in the soil and plan our cultivation so that these losses may be cut down to the minimum.

In all soils there is an upward movement of water. The drier the conditions of the atmosphere and the higher the temperature, the more rapid becomes this upward movement of the water and hence the more rapid the evaporation unless we understand just how to control this loss of moisture and have cultivators adapted to the purpose.

One of the main objects of tillage in dry weather is to hold back, or keep down, this soil moisture; at least, to so control it that it will pass through the plant that is upon the soil rather than pass out and be evaporated without going through the plant. Fine tilth, intense cultivation of the surface soil, will seal over the surface of the soil against escape of the moisture, and retain it for the use of the plant roots. Good surface cultivation makes it possible to carry cultivated crops through a dry time very successfully.

The yield of cultivated crops during a season of severe drought depends upon the frequency and kind of cultivation. The early cultivations should be deeper in order to develop large amounts of plant-food and destroy weeds. The later cultivation should consist of frequent shallow cultivation; we want to make such a fine condition of the surface soil that it will form a mulch, and the moisture as it presses to the surface will be held underneath this mulch. The result is that the moisture is saved for the roots of the plants, and the crops go through long droughts in better condition. I firmly believe that the yield of every cultivated crop can be increased fifty per cent during dry seasons by understanding these principles and putting them into practice.

In buying a cultivator it is often possible to obtain one that has two sets of teeth, one set for early cultivation to cultivate deep and destroy the weeds and another set, of light, narrow teeth or spring teeth for shallow cultivation after the plant roots have become well started and to keep a mulch of loose soil on the surface. This is an excellent idea, as by changing teeth we can suit our cultivation to the needs of the season without buying an extra cultivator. There are a number of firms who make such cultivators and I have found that they give as good service and are as durable as those that have but one set of teeth.

The weeder is of comparatively recent introduction and I have yet to see any marked good resulting from its use that could not have been gained with a two-horse smoothing harrow with the teeth set well aslant. W. MILTON KELLY.

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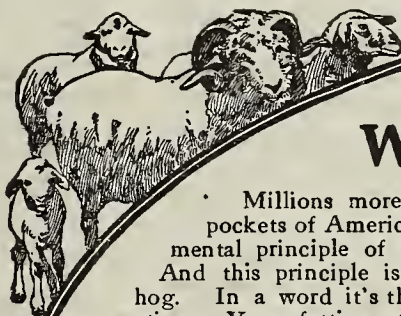
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Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/4 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

The Place to Begin Saving

EVERY good citizen should hold up the hands of President Taft in his avowed intention to cut down the expenses of the government, and no good citizen will object merely because the retrenchment hits his own interests. Most of us feel that the recommendations of a presidential message are so far off that we need not bother about them—and usually there is ground for the feeling. But President Taft in his last message strikes a blow at an expenditure in which every reader of this is interested. He recommends the abolition of the postal law that makes it possible for FARM AND FIRESIDE and other periodicals to be carried to their subscribers at the low prices which now prevail. He says that the great loss of the post-office department is in the carriage of second-class mail matter. And because they are heavier and are on the average carried further than newspapers, he says that the magazines and periodicals are the publications that create the deficit. So he recommends the withdrawal of the second-class mail privileges from the magazines and such weeklies as this. The adoption of his recommendations will force a revolution in the business of publishing such papers and magazines, and will drive hundreds of them out of business. It will double the cost of this paper to its readers. It will probably double the cost of periodical literature all along the line. We shall be glad to hear from our readers as to whether or not they think this the place to begin to economize.

The farmers of the country want the parcels post. Every other important civilized nation has it. It is a reproach to us that we haven't it. The lack of it places us in a class with the backward peoples. The parcels post would make money for the government. It would have been given us long ago if it had not been for the moneyed interests engaged in the express business.

Don't you think it would be better to make up the postal deficit by expansion into the parcels post than by going backward to the extent of upsetting the magazine relations of the people?

There is a loss to the government in unfair and extravagant rentals for mail-cars sufficient to wipe out the deficit if it were remedied. The government has long paid nearly enough rental per year for these cars to build them. In other words, it pays the railways for its cars every year, and never owns them. And after paying for them, it pays again to have the mail hauled in them. For a generation this has been a reproach to our postal system almost amounting to a scandal. It has often been called the hugest graft in our government. It would have been wiped out years ago had it not been for the influence of the railways, its beneficiaries.

Would it not have been more statesmanlike for President Taft to strike at this abuse rather than at the cheap dissemination of reading matter—education—intelligence? What do you think?

It is unfortunate that at the moment of this presidential threat it is the magazines which are criticising the administration, excoriating Mr. Aldrich and lampooning Mr. Cannon. With so many greater abuses in plain sight and demanding cure, how will Mr. Taft explain his recommendation against the charge of spite and a desire to muzzle the press?

On the opposite page Mr. Welliver gives the question a thorough analysis. His conclusions are ours; we agree that the increased rate is likely of passage unless the reading public awake to its nature and make known their opinion of it. We wish to second Mr. Welliver's final suggestion:

Write us about it. Write your congressman about it. Write your senators about it.

* * *

The Department of Agriculture is investigating the raising of edible snails as a new small-farm industry. Some boys we know are just about fast enough on foot to be useful in driving up the stock on such a ranch.

First in importance is the man, next the matter which engages the man, and lastly the manner in which the man handles the matter.

The more comfortable her winter quarters, the easier the cow will be on the feed-box.

Nobody remembers to speak well of the dead if it is the town that is dead.

The more drafts in the hen-house, the fewer your bank account will allow.

Most hunters kill more dollars' worth of time than of anything else.

How About This, Mr. Hill?

NOW that the subject of our permanent ability to feed ourselves from our own acres is so much in the public mind, any facts on the per capita production of the necessities are worth considering. The rush of people to the cities is a great fact. Forty years ago three fourths of our people lived on farms. Now more than half of them live in cities.

In other words, forty years ago three fourths of the people were making crops to feed the nation, while now only half of us are "farming it." With such a tendency at work, it really does look as if we must be coming to the point of having more mouths to feed and more backs to clothe than the fields can satisfy.

But if the half engaged in farming now make more food for each of the whole people than the three fourths did forty years ago, the case is pretty hopeful after all, isn't it? And that really seems to be the case. We farmers are still able to feed the nation, even if the average appetite is more keen than formerly. The government Crop Reporter for November, 1909, gives us some mighty interesting reading as to this. In the decade from 1866 to 1876 the farmers grew 6.2 bushels of wheat per head for the forty millions or so of our people. But in the period from 1905 to 1908 we grew almost eight bushels per head—to be exact, 7.9 bushels. So we can all of us eat nearly a third more bread than we could when only a quarter of us lived in town, and still be fed by the folks left on the farms!

How about this, Mr. Hill?

Moreover, the "remnant" on the farms make more than seven bushels of corn more per capita for the ninety millions than our predecessors did for the forty millions. We produce about three bushels more per head of oats, too, more than twice as much barley per capita and only a little less rye. We have fallen off a little in the supply to each person of buckwheat, but we make it up with almost half a bushel of potatoes more apiece for all the nation's millions. No buckwheat cakes? Then please pass the potatoes!

We haven't quite as many milch-cows per capita as we had then, but we hope they are better cows. We have more other cattle per unit of population and only a fraction of a hog less. In spite of the tariff framed by the wool and sheep interests, we have only about two thirds as many sheep in proportion to our population as then. But we raise more than two hundred pounds more hay per capita to feed to our stock, and hence it should be fatter. Altogether, the showing is gratifying. It tends to prove that the recurrence of seed-time and harvest may be counted upon with confidence and that our tables will continue to be laden just as bountifully when we have a hundred millions as when we had only twenty. Nay, they are being laden more bountifully every decade. The message of the farms to the cities for 1910 is one of good cheer and the promise that out of the fertile soil one farmer of this day will feed twice as many mouths and clothe twice as many backs as could the farmer of 1866.

* * *

It takes a hustler to understand and keep up with a hustler.

Some people are better off on the farm and some get on better off it.

The man who is afraid of work must be brave enough to face poverty.

The farmer with the telephone is within calling distance of the city.

The prosperous farmer is well acquainted with the morning twilight and the color of the rising sun.

Putting Corn Through Its Paces

THE National Corn Show, which holds its sessions in December of each year at Omaha, is about the most worth-while thing for the general farmer on the convention map. Men who have grown grain all their lives can be heard to say every day as they study its exhibits that they have learned more in a week there than in all the rest of their lives. Corn is shown there being put through its paces. Every experiment station exhibits its favorite trick of the cereal. One shows just how much it takes the tuck out of corn to be moved a few miles; and the farmer looking at the exhibit comes to see that corn is a plant that does best where it is wanted to the climate and soil. Elsewhere, the effect of heredity is shown, the loss of vigor when the silk gets no pollen except from its own stalk, the breeding for a large germ which gives oil or for a small one which gives starch. In one field we see corn bred for a low ear beside the same variety seven generations removed which carries its ears higher than a tall man's head. Over yonder is shown a kind with ears standing erect along the stalk, and beside it a variety bred from the same seed only a few years back, the ears of which hang down. All this is good for the farmer to know, for it teaches him that corn can be taught to do about what the breeder wishes. It is the most biddable of grains. It responds to treatment. It will give good yields if bred correctly. One variety will yield as much as forty bushels more to the acre than another under the same conditions. We know a good deal of this, but to see it before our eyes sends us back to the farm with renewed faith in pure-bred plants, either of corn or other grain. If all the farmers went to the Omaha show who would be paid for the trip, the town would not hold them next year.

* * *

One single hen in Tennessee hatched and raised eighty-nine chickens during the year, and did considerable laying besides.

The best-paid hand is he who is paid partly for his work and partly for his value in other respects.

Most people draw on the past for all their wisdom, and expect the present to let them parade it.

When pigs go hungry to bed their dreams cost money to the owner.

Before you can cure the gossiping tongue you must heal the itching ear.

Monosyllables are sufficient for the wise, but fools like jaw-breakers.

A well-balanced brain will not spurn the balanced ration.

A childless home is as cheerless as a starless night.

Wheat

IN 1261, wheat was worth fifteen cents a bushel in England. It never rose as high as twenty-five cents until 1541, when it soared to thirty-five cents. It first struck fifty cents about 1570. Between 1611 and 1620 it passed the dollar mark, and touched \$1.07. From 1620 to 1720, a hundred years, it averaged more than a dollar, and in this whole period there was only one ten-year period when it averaged under that price. Its highest ten-year average was from 1691 to 1700, during which time it averaged \$1.44. Its highest period was the eighty years from 1770 to 1850, during which time it averaged, by decades, \$1.52, \$1.61, \$2.11, \$2.94, \$3.07, \$2.16, \$1.74 and \$1.63. It will be noted that in the decade from 1811 to 1820 the price averaged over three dollars a bushel. It may be interesting in this connection to remember that Prof. J. E. Thorold Rogers asserts that the best times the common people of England ever have seen in the matter of the real purchasing power of their wages was in the latter part of the fifteenth century, and the worst about 1820. The bushel of wheat in the former period ranged about sixteen cents in price, and in the latter about three dollars. Not that we favor fifteen-cent wheat—we are just stating the fact.



The FARMERS' LOBBY.

By Judson C. Welliver

Proposed Legislation That Hits Every One Who Reads . . . Retrenchment That Does Not Retrench . . . Loss to Publishers, Loss to Public, and Ultimate Loss to Post-Office . . . What Business Management Could Do With the Postal Service . . . More Express Profits or Rural Parcels Post?

IN THE recent annual message of President Taft to Congress—the first communication that has come from the present executive—there was no proposal which has attracted more attention or has been received with more wonderment than the serious proposal that the postage rate on periodicals be increased to nine cents per pound in order to wipe out the deficit of the department. The present rate is one cent per pound.

Two chief reasons have been accepted as sufficient for giving this low rate. One is the unquestionably good public policy of giving the whole people equal opportunity to keep in touch with current intelligence. Nothing is furnished to the people so cheaply, in proportion to its cost of production, as reading matter. The publishing business is the seventh largest in the country, according to census statistics. The immense investment in it is based on the long-accepted security of a moderate postage rate, uniform to all parts of the country. People can afford their newspapers and magazines because the publishers have passed on to the people the benefits of cheap transportation and large production. In no business in the land is competition more genuine or constant.

What the reading public has gained is indicated by the fact that the daily newspaper commonly costs one penny where not many years ago it cost five cents, and it is a vastly better paper. The magazine that in the memory of people still young cost fifty cents was not to be compared with the monthly now put out for fifteen cents.

If it were possible, then, to separate the first-class, or letter, postage from the second-class, and to assign to each its fair share in the expense and the revenues of the post-office department, and if by that process it were found that there was a loss on the second-class business, there would be ample justification for it in the fact that this privilege of cheap reading matter and better reading matter has made the American public the greatest consumer of reading that the world ever knew, and simultaneously the best educated and most intelligent public on earth.

But it is not possible to make such a separation, despite that the postmaster-general in his annual report assumes that it has been done. And this is the second and the purely business reason which has always, until now, been determining in favor of continuing the low rate on second-class mail matter. This side of the case must be explained.

First-class mail matter is actually profitable at the two-cent rate, low as it seems. Anything which tends to increase the volume of first-class matter, therefore, is a good thing for the post-office department.

Now, it is conceded by all investigators that the low-rate, second-class matter gives rise to a vast proportion of the first-class business. Advertising makes the market in which a huge share of the business of the country is done. An advertisement is carried, in a periodical like FARM AND FIRESIDE, to hundreds of thousands of people. The people who read the advertisements and write letters in answer to them must send those letters first-class; and this great by-product, if it may be so called, of the second-class, makes the great profits of the first-class.

How tremendous is this bulk of business, and how unlimited are its possibilities of making business, is illustrated by the proposition which a great Chicago publisher three years ago made in all seriousness to the government. He proposed to lease the postal business, to guarantee to charge only present rates and to pay the government several millions annually—my recollection is that it was five million dollars—for his privilege. Inasmuch as the post-office department last year ran at a loss of over seventeen million dollars, this seems like a remarkable proposition. But this business man knew what he was about, and was ready to give bond to perform his contract.

His project was simply to run the business on a business basis; to pay the railroads, for hauling the mails, prices based on the commercial value of the service, as the express companies pay, and not on the present excessive scales dictated by the political "pull" of the railroads. He had figured out that by reducing letter postage to one cent he could actually increase the net revenue, because he would so vastly increase the business; and, finally, most convincing of all, he had carefully figured out the amount of first-class mail matter which originated from a given amount of newspaper and magazine advertising carried in the mails. As

a publisher, he had induced his advertisers to keep record, for a fixed period, of the number of letters received in response to advertising, of their replies to these letters, of postage paid on parcels, etc., in response to mail orders; and he had figured out, from this actual experience, that the second-class business at one cent per pound was in the end highly profitable because of the indirect contribution it made to the postal receipts.

Of course, the government didn't seriously consider leasing out a postal monopoly. Nobody would dream of such a thing. But the Chicago man presented his case so convincingly that it actually inspired some serious effort to get the post-office put on a business basis. An effort was made to reduce the rates of payment which the government makes to the railroads for hauling the mails, to something like reason and fairness. A little of accomplishment was registered; but it was only a little. The railroads are still paid, for hauling the mails, from two to four times as much as the express companies pay for like service in the transportation of express matter. It has been carefully calculated that if mail matter were hauled on the same business basis as express matter the postal deficit would be wiped out.

But the Taft-Hitchcock program is not to do this, but, instead, to raise the rates on the periodicals. This, of course, would have to be met by the publishers increasing their subscription prices, which are now, in this country, much the lowest in the world. That increase would have to be met by the public. The alternative would be to read less—and to know less.

* * *

POSTMASTER-GENERAL HITCHCOCK, in his annual report, strongly sustains the President's recommendation to raise the second-class rates. In order to make the case as strong as possible he makes this remarkable statement: "In so far as the rates of payment for transportation of the mails are fixed by contracts based on competitive bidding, there can be no doubt of their fairness."

This is, I believe, the first time a high and responsible official has seriously assumed that the "competition" between railroads for the mail contracts is the real thing. There is the testimony of the railroad managers themselves in many cases that the competition is only nominal, and that there are practically agreements among most of the competing lines about this business. If the postmaster-general will investigate, he will find he is actually paying three and four times as much for hauling mail matter, by the ton, under competitive contracts, as the express companies pay the same railroads for like matter; and in many cases vastly more than this. Yet he declares these competitive contracts are "perfectly fair."

The postmaster-general likewise sustains the President in the suggestion of a "zone rate" for second-class matter. That is, he would have the rate depend on the distance. Periodicals would pay, say, three cents if hauled one thousand miles, and six cents if hauled two thousand miles. That has a most reasonable look at first. But let's see how it would work.

In the first place, it would violate the universal, basic rule of a flat rate for all distances by mail—the principle that has made the postal service the magnificent public convenience it is.

But that is not the most important feature of the matter. The effect of such a zone rate would be to discriminate directly against the people at the longer distance from the place of a periodical's publication. We would see publishers compelled to charge one price for their paper within one hundred or two hundred miles of its place of publication, and a higher price elsewhere. Or else the price would be raised for all alike, on the theory of averages. And the consumer would have to pay it. The consumer? Let's see; it was Senator Lodge who, in the tariff discussion, remarked that "the consumer is a good deal of a myth." Certainly his interests seem to be regarded as decidedly

mythical in the consideration of his relation to his supply of reading matter.

But the wonder of it all, as a business proposition, is developed when we turn to the effect which would be sustained by the postal revenues themselves, if there should be an increase in rates, of such extent as is proposed. To raise the rate from one to nine cents—Mr. Hitchcock says it costs 9.23 cents per pound to handle and transport periodicals—would place the rate so high that the post-office department would lose almost all the business. *The express companies, doing business on a business basis with the railroads, would grasp instantaneously the opportunity to annex this immense tonnage.* They would make a rate lower than the postal rate, and take the business in very large part.

Now, let us examine what effect that would have on the government's contracts for hauling mails. The second-class matter last year, according to the postmaster-general, constituted sixty-three per cent of all the mail matter hauled. While the rate per ton paid the railroads is now excessive, yet, if a vast share of this second-class matter were taken away, the present rates paid the railroads would suddenly cease to be excessive. With the tonnage vastly reduced, the railroads in many cases would be compelled to get even higher rates than their present excessive ones in order to come out even on the business. The deficit would be actually increased, very possibly necessitating an increase in the rate on letters, and certainly requiring either that or an increase of the annual loss sustained by the post-office department.

In that exigency we would have the pleasing spectacle of a "business reform administration" of the post-office increasing the cost of the people's reading matter, increasing the rate of payment to the railroads, increasing the business and the profits of the express companies—and benefitting absolutely nobody but the express companies.

It is in fact the greatest proposal for helping the express companies to bigger business and profits that could possibly have been figured out.

And recently one of the express companies paid a five-hundred-per-cent dividend—wasn't that the figure?—and all of them have been attracting attention by reason of their gorged treasuries and swollen profits. How does it look to the average reader of FARM AND FIRESIDE?

* * *

THE postal deficit for last year, according to the postmaster-general, was \$17,479,770.47. In a business whose total receipts were \$203,562,383.07 that isn't a very vast sum. Suppose it could be wiped out by increasing the rates on periodicals; what good would it do? The process of readjustment of the business to the new conditions would inflict loss on the publishers, while at the same time compelling the people to pay vastly more, in additional cost for their reading material, than the saving of the deficit would amount to. It isn't possible to rip up and completely reorganize the conditions on one of the greatest businesses in the country without serious effect. Of course, the publisher has no particular right to plead for public consideration for his own case; he must take care of himself. He will, too; but when he passes the increased bill on to the reader, the difference will be felt in the necessarily increased price of the periodical.

The long and short of the whole matter is that a revolutionary effort to make up the deficit in such fashion as this would take away from the postal service a vast share of the real benefit which that splendid facility has brought to the people, would increase the profits of the express companies, would reduce the profits of the publishers and ruin more than a few of them. It would raise the price and reduce the consumption of the best class of reading matter. It would be more likely, for the reasons I have stated, to increase than to reduce the deficit of the department; it would very likely compel an actual increase in the rate on letters.

Doesn't that seem a curious chain of results from a proposition in "business reform?" Now consider some of the business methods of the post-office department as now organized.

Do you know that a parcel on which the postage from Washington to Baltimore, forty miles, is sixteen cents can be sent by mail from Washington to Rome for twelve cents? Well, that is true. Why?

Because the United States, though denying to its own people the benefits of a parcels post, is a party to the

[CONCLUDED ON PAGE 30]

A New Year's Message

Written Exclusively for Farm and Fireside

By Rev. Charles F. Weeden

Pastor of Harvard Church, Boston



MAKE the most of yourself as you are. You live. You are somebody. You are made for something. Your life has a plan. Any apparent failure cannot be attributed to a lack of personal ability. At the start you have all that is necessary to success. Allow me a word

to our young people. Your personality is worth everything to you. The "North Dakota," the finest and largest warship of our new navy completely equipped from search-light and firing tower to torpedo-tube and rifle gun, if it had no human will behind it, might be captured by a skiff with a resolute sailor aboard. Add to the power of your will that of reason, thought, affection, hope, and you have a value immeasurably great as your

Capital in Life

Accept the situation in which you are placed and make the most of yourself by the powers you possess and by the agencies which are offered.

One of these agencies is your time. Make the most of it. Call yourself to account for every hour of the day. Keep an account with time, the hour when you will rise and get at your work. Block off the entire day systematically. To lose time is to permit some value which you own to be lost. It is a nugget of gold unmined. It is a precious portion of life undiscovered. There is joy and gain in it for you. By it you may come to self-realization. It is something often thrown away which involves grand possibilities. There are two very common ways of losing time—by loafing and by misuse. The former, if you are young and husky, is abominable, the latter is deplorable. There is a great deal of reverie which is mistaken for thinking. There is much of imagination which is counted reality. Many are "busy," few are industrious. Thinking is hard. But there are wheels in your head which can turn out a finished product if you will only set them to humming. A "bee in your bonnet," political or agricultural, may mean a fine thing for you. It is better than a clogged and rusty interior head-gear, anyhow. I have in mind some young men who employ their evenings in the Young Men's Christian Association classrooms. These fellows will be heard from. Lincoln, in his isolated home, began with only the Bible and Pilgrim's Progress. Set your brains to digging out of some first-class book thoughts and plans that will set your own mind aflame. Then turn out something of your own.

For the most part the regular hours of duty, the working or the study hours, are not so liable to abuse as the interval which falls to us outside the daily routine. Making the most of one's self will be making the most of recreation hours,

The Chink Moments

of the time which is especially our own and for which we are directly responsible to no one. Modern social life may become so absorbing as to occasion a serious waste of time. Happily the habit of employing time may be acquired. It is yours, my friend, to use. Time is the "stuff life is made of." It may be long. It certainly will, when it is gone, seem short. Use it to-day; the future does not belong to us.

Then, too, make the most of your opportunities. These, very likely, will not suit you. They seldom do. We must take the world as it comes to us, not as we would like to have it. Opportunities will require your biceps and your brain. Go at them with sledge-hammer purpose. The abilities we have are never increased till we give full scope to their powers. When a base-ball captain calls "Play Ball!" it means business for every player—it means the concentration of wit and muscle to win the game. Like the batter in the game, the ball comes to him, rarely straight, but in curves, ins, outs and drops. He needs a "good eye" to straighten out the leather for a two-bagger. Life comes to every man in ups and downs and zigzag shoots. No opportunity is insignificant. We never know what we can do until we try our best. Neglect not the gift that is in thee. Be diligent in these things; give thyself wholly to the great game of life. Indolence is fatal. Gossip is idle—and mean, too. Laziness is practical suicide. It is proverbial that an overwhelming majority of successful men began life with meager chances. Make the conditions favorable by accepting them. Be determined to use present means for a higher climb. It takes a lot of failures before a man gets determined. Using opportunities multiplies them. They will help reveal what you can do best, and along that line is your success.

This matter of opportunity is often put in a discouraging way. We look at it differently as we grow older. Opportunity is represented as a swiftly-passing figure. You must seize it by the forelock, for it is bald behind—it has wings on its feet and you cannot overtake it. All of which is true and sad about that one opportunity. If we are sorry we lost it, genuinely so, and look earnestly and sincerely for another, it will come along some day. That legend on the walls of the temple at Delphos, "Know thy opportunity," is a lesson to be learned, not a hopeless bugbear. Every New Year, every new day, God grants you life, brings you also fresh opportunities. Opportunity, some one says, is the flower of time—another may call it the rose, but the stalk remains, and time comes when opportunity is gone. Very well, be patient and grow another flower—and a better one. More opportunities will come, God is merciful in that. Let the promise of coming chances hearten you as you look out upon the new year. But the knowing our best moments for action will not come by any whisperings of fairies in our ears or any accidental happenings. Acceptance is perception. Embracing present duty prepares the mind for the recognition of the proper time for decisive action. Opportunity is a matter of education. Men appear sometimes to take a sudden leap into success, but if that attainment is permanent the success has been due to an acquired knowledge of the time to leap. Are there briars, swamps, wild carrots, stumps and stones, arid acres, woodchucks, crows, rattlers, hornets? There's a human species, too. However, saw wood, and keep mum. Time will cut out most obstacles. You can make them foundation-rocks, clover-meadows, alfalfa-fields, watercourses and harvest-ground. Defeat? Well, who has not met it? What of it? Did you learn the lesson of defeat. That is the point. If you did, you will never be beaten in all that makes for true manhood and womanhood. Remember

Life Spells Opportunity

and while you breathe, you may win. When Harvard was defeated by Yale in foot-ball the Harvard captain was discovered next morning with a few of his men kicking the ball about. "What in the world are you fellows doing?" some one asked. "Practising to beat Yale next year!" That is the grit and the spirit that will win out in the important battles of life.

But about these lessons of life. If we moan at them as Mrs. Gummidge did—call ourselves "lone, lorn creatures" and consider that "everything goes contrary" with us—we shall surely be numbered among the whimperers and the grumblers. The brave spirit looks deeper into problems. Life is not altogether for success, but it is a school—and every day the task is harder.

You may recall the little lad who was bearing in his hand a paper containing the copy his teacher had given him. It was all covered with cramped little scrawls, big blots and thumb-marks. He lifted his tear-stained face to her and with a sob said, "Please, teacher, mayn't I have another sheet, I—I've spoiled this one." God gives us the clean white page of another year. What shall we make of our copy in 1910?

The farmer is in partnership with the soil. There are certain conditions under which the fields yield their harvest. "Ye are God's husbandry," wrote that big-hearted man, Paul. There is a primary idea involved in the thought of husbandry—translated literally it means, "Ye are God's tilled land." Now, cultivated land suggests preparation. The crust, the ground hardened by the frost of sin, must be broken up before the seeds of divine life can find a place of congenial growth. Human pride, passion, prejudice, self-will must be broken up by the spade of adversity and the plow of sorrow. "My son, regard not lightly the chastening of the Lord." It is for chastening that ye endure and allow God as your Partner to make the most of you. God dealth with you as with sons. God wants us to be strong; but a man is strong only as he is right, and a man cannot be right till he is right with God.

After the plowing, the harrowing. Our trials force us to think, and with the strange vicissitudes of life compel us to think of God. Sometimes it is only a tap on the shoulder. Oftentimes the deep stress of hard circumstances. It seems to be the law of our soul's development. We grow by hardships and by meeting them with a fine, undaunted spirit.

What, my heart, if summer rain
Did not beat and bend the grain?
So be patient in thy woe;
God sends grief that thou mayest grow."

It is only as we have suffered or been in peril that we have an experience and power which is

helpful. We do not always like it, but afterward we see the truer lesson of life and we make the most of ourselves when we hold out the helping hand and lift our neighbor and brother. A fishing-schooner of Gloucester was at one time caught at sea in a fearful gale. Three times the sailors thought they were lost. The captain promised God if he came safe to land he would do some good thing for his fellow-men. Unexpectedly the little ship reached port safely. The captain kept his word. Out of that hard experience the Portuguese mission was founded.

After the plowing, the harrowing; then the planting, the hoeing. This is watchfulness, to keep the weeds of sin, the tares of trouble, the ever-present purslane of care from choking the tender growth of the soul. Life must sometimes be sheltered. Vigorous hoeing is quite as important as the more heroic treatment of the plow and harrow.

Character is Not Grown in a Day

A college student once asked President Finney if it were not possible to complete a course in two instead of four years. "Young man," said Finney, "It takes Almighty God half a century to grow an oak, but we can make a squash in six weeks." Divine delays are not God's denials. Hold on; hold fast; hold out. In your patience you shall possess your life.

Husbandry involves toil. It is the art of tilling the land. The farmer works hard, God gives the increase. The spring showers, the June sunshine, the summer warmth—this is the Great Partner's part of the work. Wherever man labors in harmony with the laws of Nature and Nature's God, the increase comes, whether it is the farmer, the electrician or the Christian. We are to keep our souls in the atmosphere of God's presence. But we have our part to do. Our lives, our souls are the tilled land, and our wills are represented by the hard-working son of agriculture. Nothing is more discouraging than a lazy farmer; nothing is more disheartening than an indifferent Christian. What you'll will to do, you'll do. Will power is the scepter put into our hands. It is the duty of a man to obey the higher law of his spirit just as he responds to the law of growth in his corn-field or potato-lot. Work your land; work out your life, and heaven will bless you with rewarding riches and, what will be a great joy in your heart, make you a blessing to the world.

After all, the contrariness of life is not so bad. It is a challenge to our latent forces, a summons to man's ingenuity and pluck. From my home by the ocean I can observe the yachtsmen. They have rigged their boats to conform to law and to catch the slightest zephyr of the skies to make their craft move faster than a rival, and the skipper who conforms most accurately to the laws of wind and tide swings in ahead. I see ships, too, going various and different ways with the same wind. By adjusting his sails the pilot may go to any harbor he wills. Making the most of yourself? We all like to succeed. Man is out to make a harbor, win a pennant, rush a goal, harvest a crop. Aye, but best and highest of all, he is out to win a crown! "Man is the biggest thing in sight," I once heard Doctor Meredith say. That is it, your value, the Temple of God. It is what a man is that God cares about more than anything else in this universe; the man coming to his nobler and truer and better self; the man of perfect stature. Here is a little New Year sermon. Christ the strong foundation, Man the Temple built upon Christ. This is the Heavenly Father's idea. What man may become in Jesus Christ will be

The Masterpiece of God

Life in the grain or in the heart is the great mystery, and the powers that make life are spiritual forces. Our Maker would develop them in us. Here is the list: Love, joy, peace, long suffering, gentleness, meekness. Do you remember Ralph Connor's beautiful story of the canyon flowers? At first there were no canyons, but only the broad open prairies. One day the Master of the Prairie, walking out over His great lawns where were only grasses, asked the Prairie, "Where are your flowers?" And the Prairie said, "Master, I have no seeds." Then He spoke to the birds and they carried seeds of every kind of flower and strewn them far and wide, and soon the Prairie bloomed with crocuses and roses and buffalo-beans and the yellow crow-foot and wild sunflowers and the red lilies all the summer long. Then the Master came and was well pleased; but He missed the flowers He loved best of all, and He said to the Prairie, "Where are the clematis and the columbine, the sweet violets and the wind-flowers and all the ferns and flowering shrubs? Again He spoke to the birds, and again

[CONCLUDED ON PAGE 25]

Your Last Chance

To Get Farm and Fireside at These Low Prices You Must Order Before January 31

FOR the last time you can obtain FARM AND FIRESIDE at the old prices. The Editor has extended the old prices in order to give every old and new reader of FARM AND FIRESIDE the chance to subscribe before the raise in price. Never before has any paper offered its readers so much for so little money as FARM AND FIRESIDE now offers you. Never before has there been published a farm paper so big, so valuable, so handsome as FARM AND FIRESIDE. No present reader can afford to miss the next year's issues of FARM AND FIRESIDE—The National Farm Paper.

THE noted artist, Balfour Ker, has painted for FARM AND FIRESIDE a wonderful picture, entitled, "Her Mother's Voice." It is a greater picture than his famous "Home, Sweet Home," which delighted hundreds of thousands of our readers last year. As a New Year's Gift to our readers we will send a copy of "Her Mother's Voice," in colors, reproduced on heavy paper, size 11½ by 16 inches, with every subscription, as explained below, before January 31. This great picture is a beautiful work of art, contains no advertising, and will come to you carefully packed, all ready to hang up in your home.

This Picture With Every Subscription

EVEN though your subscription to FARM AND FIRESIDE may not have expired, it will pay you to renew now in advance on the order blank below and obtain the painting, "Her Mother's Voice," without cost. Your new subscription will be entered to begin the month after your present subscription expires. Every new subscriber before January 31st, will also receive the picture.

A Few Great Features For Farm and Fireside

THE Editor promises that FARM AND FIRESIDE for 1910 will be the greatest farm paper published. No expense has been spared to secure the leading men in every line of agriculture to give their best writing to FARM AND FIRESIDE.

Our Horse Expert

MR. DAVID BUFFUM has joined the FARM AND FIRESIDE staff regularly as an expert writer on horse management. He stands at the head of all writers on horses in America.

He will at once furnish us a series of articles on breaking, managing and handling horses. These will deal with all the vices of horses, like kicking, shying, running away, balking and the like, and will tell how they may be scientifically treated and cured. He is a farmer and knows the horse business from the farmer's point of view and their needs. That's the way he will treat the subject in FARM AND FIRESIDE.

Soil Management

PROF. F. H. KING, of Wisconsin, is now one of our contributors. He will write on soil management. The era of intensive farming is coming in. The Chinese, Japanese and Koreans are the best intensive farmers in the world. Professor King will tell us in a notable series of articles some of the wonderful and interesting things he has seen in a study of these wonderful little farms of the Orient. Professor King stands at the head of his profession in America. He is known all over the world as an authority on soil management. His series will be of the most intense interest to those who desire to make the most of their acres, and to all who like to know about the farms and farmers of other lands.

FARM AND FIRESIDE'S "Benefactors of Agriculture" series is now running. In it the best writers in America will deal with agricultural progress as typified in the men who have made epochs. We have now on hand one on D. Ward King of split-log drag fame written by Forrest Crissey, and dealing with the good-roads movement; one by John Snure, the noted Washington writer, on James Wilson and his work as Secretary of Agriculture, and one or two more to follow on.

IF YOUR subscription has expired or expires this month; send your renewal now, and get the new and greater FARM AND FIRESIDE at the old low prices, and obtain the painting, "Her Mother's Voice," without cost. Under the painting are printed Longfellow's great lines which inspired the picture, beginning, "It sounds to him like her mother's voice." Every FARM AND FIRESIDE family will love this beautiful painting.

What Readers Say About Farm and Fireside

I congratulate you on the improvements you are making in your magazine. I consider it indispensable as my subscription will testify. I enjoy and endorse the writings of Mr. Lewis. We need to cast the light of public inquiry on our public servants, irrespective of the parties they represent.

Very truly yours,
H. B. HAYES.

6 Madison St., Adrian, Mich.

We all love your paper and would be at a loss if we were without it. We consider it all it claims to be.

Yours respectfully,
MRS. F. J. RUSSELL,
Winchester, Virginia.

R. R. No. 2, Box 100.

Having found FARM AND FIRESIDE a valuable and up-to-date magazine in the past, I wish you success in the future, in producing such a large and well-finished paper. It pays a subscriber to take the paper four years.

I remain yours,
JAMES A. BURKE,
Worcester, Mass.

42 Belmont Street.

We feel we could not do without the FARM AND FIRESIDE in our home. I think it is the best farm paper I know of in circulation, and I would advise every farmer who wants good information to take the FARM AND FIRESIDE.

W. S. ROWLDY,
Seward, New York.

R. R. No. 1, Box 7.

I am well pleased with November 10th issue of FARM AND FIRESIDE and think it quite an improvement. Some of the departments I don't like, but perhaps some others do. FARM AND FIRESIDE is the best farm paper printed because there is reading in it for the whole family. The young people like it better with continued stories not to run too long.

Old subscriber of FARM AND FIRESIDE, in family for 29 years.

W. T. LEECH,
Reed's Mills, Ohio.

I am proud to be a subscriber to the one honest and fearless agricultural paper I know. I have known farm papers, run by a political syndicate in the East, to insert, just before a presidential election, an advertisement (full page) advocating the election of the nominees of a certain political party, and yet I never saw a word of criticism published in those papers. Stick to Lewis. He is opening our eyes. Farmers are too party bound. No class is more so. What farmers want is to get some germs of the "Iowa Idea" in their systems, do their own thinking and not take all seen in party papers for granted or even meant for their own good. There are others—the grafters.

WILLIS G. CLARK, Springfield, New York.



PAINTED BY BALFOUR KER

HER MOTHER'S VOICE

*It sounds to him like her mother's voice,
Singing in Paradise;
He needs must think of her once more,
How in the grave she lies;
And with his hard, rough hand he wipes
A tear out of his eyes.
—From Longfellow's "The Village Blacksmith."*

Twenty - Five Valentine Post-Cards

We have secured for FARM AND FIRESIDE readers the most beautiful set of Valentine Post-Cards in the world. There are twenty-five of them. Every one printed in gold and many colors, and every one is a handsome valentine ready to send to a friend. You can get them all without cost.

You will find a picture of some of the post-cards on page 30 of this number.

How to Get the Cards Without Cost

We will send you these 25 Valentine Post-Cards if you send us two subscriptions to FARM AND FIRESIDE—one of the two subscriptions can be your own. Each of the two subscriptions may be for four years, or two years, or one year at the prices given opposite. But remember that you must send two different subscriptions. Balfour Ker's great painting, "Her Mother's Voice," will be sent to each of the two subscriptions. For three different subscriptions we will send two sets of Valentine Post-Cards. For four different subscriptions we will send three different sets of post-cards. Each set of post-cards can be sent to a different address if desired.

Until January 31

Until January 31st you can obtain FARM AND FIRESIDE at the prices given below. The new price is 50 cents a year. If you send us a subscription on the name blank opposite you will receive Balfour Ker's great painting without cost.

35c

Send only thirty-five cents for a year's subscription to Farm and Fireside—twenty-four issues of the greatest farm paper published. By subscribing now for one year you will save 15 cents. You will receive the Painting without cost, postage prepaid.

50c

Send only fifty cents for a two-year subscription to Farm and Fireside—forty-eight issues of the greatest farm paper published. By subscribing now for two years you will save 50 cents. You will receive the Painting without cost, postage prepaid.

\$1.00

Send only One Dollar for a four-year subscription to Farm and Fireside—ninety-six issues of the greatest farm paper published. By subscribing now for four years you will save \$1.00. You will receive the Painting without cost, postage prepaid.

If you are a present subscriber your subscription will be entered to begin the month after your present subscription expires. If your subscription has expired, or if you are a new subscriber, your new subscription will begin with the next issue. Use the name blank opposite.

Mail Your Order Before January 31
FARM AND FIRESIDE, Springfield, Ohio

Write Your Order Here

A subscription to Farm and Fireside on this blank entitles you to Balfour Ker's Picture. Order before January 31.

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| of Also send me, without cost, Balfour Ker's great painting, "Her Mother's Voice," packed in a tube, post-paid. | | | |
| Name..... | Street or R. R. Address..... | Town..... | State..... |
| (Jan. 31) | | | |
| If you send two subscriptions you will get the 25 Valentine Post-Cards, also. Use the space below for the second subscription. | | | |

To Get the Picture You Must Use or Mention This Coupon



"'Geordie, boy, ain't ye going to leave me one child?'"

A Desertion

By Marion Hill, Author of "The Pettison Twins," Etc.



HAD not known that "the last time" had a homely pathos of its own, a pathos which could throw a kindly glamour over even hated tasks, and he wondered, almost angrily, at the wistful heart-tugs he felt when putting up the barn-yard bars after the cows had lumbered haughtily through. Red Bess, from whose ample neck the bell swung, and who always

elected to follow the herd rather than to lead it, was ever so awkwardly slow about taking to cover that she had nightly to be clodded, but this evening Geordie threw aside the missiles with which he had mechanically provided himself.

"I know how you feel, Bess, about having to keep on doing things you hate," he muttered. "Now, don't give me your slobby affection!" he pleaded, shoving away the friendly damp nose which snuffled at his coat sleeve. This was the one time when he did not want to be reminded that the animals, from first to last, from big to little, were fond of him, would miss him. Even the chickens, surely the most unloving of household things, were clustered interestedly around him, perking their necks ingratiatingly at him from different angles, occasionally helping themselves to imaginary bits of food, pecked from the folds in his jean pants, associating with him as heartily as their extremely aloof dispositions permitted.

The three cats had come to help him put up the cows, and were sitting very close to him—of course with their backs turned, they would not have been cats otherwise—and they curved their indifferent heads from time to time, carefully noting his movements, so as to be prepared to go when he did. They bore themselves very dependently for cats, carrying the plain impression that life would be tame and aimless without Geordie.

From their near-by pen the two colossal pigs lolled over their fence, their fore feet prayerfully under their snouts, and fixed him beseechingly with their tiny, bad, blood-shot eyes. To them Geordie was regular gift vaudeville, to be safely depended upon to hurl them apples or other beneficent scraps, then to howl with laughter at their consequent imprecations and scrambles.

From freshly-bedded stalls, Dex and Fan whinnied pleasantries to him while they munched their oats and nosed the fragrant hay. The horses loved to snicker confidences to Geordie.

Chasing belatedly up the road, a mere flying streak of red dust, came Jip, the ugly hound. Jip had started decorously enough to accompany the cows home, but had switched off on a private rabbit hunt. Arrived, he hurled himself upon Geordie with explanatory bark-

ing shrieks which plainly said, "I feared you were lost! It was awful! For goodness sake, Geordie, why don't you stick closer!"

With his hand upon the hound's head, Geordie finally looked slowly around him, taking a conscious, mute farewell of all the pictures he had grown up with since babyhood. The tragedy of the look lay in the fact that as yet no one but he himself knew that he was really going.

To an unprejudiced eye the evening scene was one of calm and beauty, rich in color, shading in tender grades from the brilliant crimson of the frost-touched maples, through the browns and yellows of the sturdier apple trees, to the hillside greens where the young rye was sprouting; and rich, too, in a suggestion of contented plenty, carried by the bulging hay-stacks, by the fields of shocked corn in which the golden pumpkins rolled, by the bagged cider-apples leaning against the tree-trunks, by the architecturally-piled wood telling of roaring winter fires and hearthside cheer. But to Geordie, who knew, the surroundings spoke only of unending labor of back-breaking application, of heart-breaking unresponsiveness.

"But I've done with it," he said aloud, "and I might as well go in the house and tell mam and pap."

He frowned impatiently at the provincial titles, rebelling against them as he rebelled against his own diminutive Geordie. But it had been "pap" and "mam" and "Geordie" for some twenty years now and each day but added a strengthening rivet to the absurdities.

With his foot on the porch step, he turned again to take lasting farewell of all the familiar sights grown suddenly new and strange by reason of his intended leaving. But he felt no sorrow. His strong young face was alight with dreaming and his happy eyes were shining with hope and longing.

"To-morrow!" Whispering the word like a benediction, he passed into the house.

"Hev ye shet the wagon-shed, Geordie?" asked pap, making a feint of rising from his rocking-chair hollered by much sitting. Pap's policy was comfortably to pretend that he himself attended to all essentials and that Geordie was but a youthful putterer on the edge of affairs.

"Don't I always?" exploded Geordie, his tone indicating that he had long lost patience with the prevarication.

"Geordie, boy," interposed mam pacifically, "set down to supper. I've made ye pop-overs."

The attention of the pop-overs caused the lad to feel like a traitor and he put off speech till the bedroom lamps were lit.

"Pap—mam" he then said falteringly, "before you go up-stairs I want to say that I've thought things over, as you asked me to, months ago, but I'm of the same mind, and I must leave."

"I've told ye that ye can't," said pap angrily, yet with fear, "and that settles it."

"Pap, it doesn't settle it." The boy's voice, though sad, was unalterably firm.

A stricken figure was mam, the lamp she held casting unkind revelation upon her gaunt frame and wrinkled face.

"Geordie, boy, ain't ye going to leave me one child? They's all gone but you."

"It was their right to go, mam. And it is mine. Bill went when he wasn't but sixteen and he's fairly rich now. Martha and Edy wern't in the city a year when they married well and happily. Sam next. Sam's turned into a gentleman. He's found libraries and lectures (free, mam) that have given him what he never could have got here, let him study ever so hard. Why should I be the only one to stay, sacrificing every chance a man hopes for?"

"Because we need ye," confessed pap grudgingly. "And what hev the others, when all's said and done? Jes' wages. Don't one of 'em own a farm?"

"Nor do I. You and mam would sell to-morrow if you got your price. And you're right. It's yours to sell or keep. I'm not blaming you one mite, not in anything. It's things are wrong; not you. There's nothing here but work. Of course there's work everywhere, but there are returns, too. Here, it's just work. From sun-up till sleep-time, it's just work."

"And what is it for me?" demanded pap shakingly.

"Your choice, for one thing. No one makes you stay. You came here of your own will and bought, and have stayed on because its your home. Me, I just work like a hired man, only without a hired man's wages. And I haven't any more to say about the place than the others who ran away from it the first chance they got. Which is right, too; it's their home as much as it's mine. But they took their freedom, and I must, too. I'm going, not to shirk work, but to find the best. This isn't work here, it's slavery—I've toiled on this farm since I was a boy of not more'n six—fourteen years—and not a penny to my name! I'd be mad to keep on at such a gait."

"Sam tells me that my muscle alone, even without brains, will earn me two dollars a day, working only eight hours, too, instead of all daylight. Twelve dollars a week! I haven't seen twelve dollars of my own, all in a lump, in as many as twelve years. And he tells of pictures, of beautiful buildings, of books and theaters. Oh, you know! What's the use of saying more? Only, I'm going."

"Going to bed and going to quit talking foolishness!" quavered pap in sudden fury, seizing his lamp in angry, shaking fingers. "An' I'm going to quit listening to it!"

As the old man stamped away, Geordie looked pleadingly at his mother for the God-speed of a kind word. But she had none to give.

"Geordie, we're on in years—ye can't, boy. How

dass ye see it any other way?" With weary rebuke in her tear-stained face, she turned from him and followed pap up-stairs.

The next morning Geordie was gone. "And all ill-luck go with him!" cried pap, frantic with the responsibilities which were his again.

"Hesh," said mam, "the boy was right. Ye done it, too, at his age, pap."

"Oh, I kin git along without him all right! I'll show ye."

With pathetic effrontery he set about ploughing the old orchard, but gave up, beaten for the time being, after he had made but three circling furrows. Geordie would have stuck to it till sundown.

"Geordie done his sheer," admitted the old man, coming to the house for water-pails.

"And more," corroborated the old woman wearily. "I ain't tromped so fur and done so much in ages. And the loneliness! pap, the awful quiet around the place!" She threw her brown-checked apron over her head and rocked to and fro, crying, "How could he act so cruel!"

"Hesh," said the old man grimly in his turn. "Geordie only done what he had a right to do. I knowed it all along, but never let on."

"I jes' can't stand the loneliness, pap! I thought mebbe he'd made off only for the day, to skeer us. But his things is gone."

"Gone!" pap's bent shoulders went lower. He, too, had been hoping against hope.

By noon the old couple were exhausted, but found their tasks not one tenth done.

"We'll git worked in," promised pap vaguely.

"Or worked out," prophesied mam. She laid her knife and fork down on the table where they were making a pretense of eating and looked drearily at her partner. "Pap, what good has it done me to raise so many children? Do ye know the only one that's left to me? It's the little one we said we'd lost, little Pheby, buried out there in the churchyard. She's bin around me all day."

"Now, mam," protested he, his head dropping on his hand. Then in a furtive whisper he acknowledged, "An' she's bin with me—little Pheby—in the orchard, a-running by the plow the way she used."

"We got one left!" Mam's head was under the checked apron again and she was sobbing.

"Don't take on," advised the old man helplessly. "Things is hard, but we've got to live 'em through, Geordie or no."

"And I got enough to do without crying," she said, dragging herself up and going about her work. For the first time in years she found herself forced to gather chips, to split logs, to carry them in, to hunt the eggs, to fetch drinking-water from the spring, to dig potatoes—the thousand and one things that the tireless Geordie had done for her, and had done so incidentally that she had hardly been aware of the service. "I never give him credit," she muttered. "Seem's now as if he done it all. The dear Lord'll have to see me through, for I can't git on alone, jus' nohow."

The afternoon wore itself painfully away, bringing an evening that was still menaced by many undone chores.

"I must rest my legs a spell afore I go for them cows," grunted pap, sitting down on the porch step to light his pipe.

"Now, pap, had ye better? The air's right chill."

"I hope I'll ketch my death and git done with it!" said pap hopelessly. "Lie down, you Jip!"

"Jip's bin carrying on like that the hull day, so lonesome he's crazy. Every whistle sets him streaking down the road. And he comes back and looks in my face so worried!"

The surface composure of the old people was here broken by the trivial sound, borne to them easily on the still air, of the in-coming shriek of the passenger train at the far distant depot. As the dog pricked up his ears and lagged restlessly to the gate, pap's face worked, and mam broke down again.

"Ef he hadn't of took his clothes," she said chokingly, "that's the train we'd be expecting him on. And I'd be baking pop-overs. Ye might as well stay to home, Jip, for our Geordie ain't coming—no more—no more!"

Her sobs angered the old man and he looked at her reproachfully.

"If ye won't let me smoke in peace, mam, I'll go after them pesky cows."

The word "cows" appealed very sensibly to Jip, who forthwith nosed through the gate and sneaked inconspicuously down the road, intending to arrive at the pasture first.

"I've quit, pap," humbly said the old woman, wiping her eyes. "Set while ye kin."

She sat down beside him, the two making a pathetically unlovely picture of old age, old age brought about less by years than by labor. Their tired eyes scanned the scene of their many fertile acres, now

so trim and promising; and in their minds was the one thought of how sadly soon those acres would show disastrous signs of missing the intelligent young strength which had kept them sternly up to productiveness.

The hearts of the old people were storm-shaken, surging with fancies of exquisite fineness, a fineness of which they were so shyly afraid that they tried to counteract it by making their infrequent speeches as prosaic as possible.

"I ain't washed yit," suggested mam once, referring to garments, not to herself.

Pap understood the hint and writhed under it.

"I'll git the water ef you leave me be long enough to ketch breath," he grumbled.

Since the well had run temporarily dry, the washing-water had to be hauled in barrels from the creek, another task which Geordie had squeezed into his overfull day.

The pauses lengthened out till dusk finally fell, threatening the quick approach of autumn's dark. Pap then knocked the ashes slowly from his pipe preparatory to rising.

"Well, if ever! look what Jip's done!" cried mam excitedly.

Far down the dim road Jip, hoarse with important barking, was piloting home the cows, leaping at their mouths to enforce his directions, hurling himself from side to side, sternly keeping them from tardy munchings by the way.

"Ain't that dog the beatingest?" continued mam admiringly.

Pap's jaw dropped as if with fear, and he stirred with misgivings so uncanny as to be superstitious.

"Jip's all-fired smart, but he can't take take down the three bars of the pasture gate," he whispered ominously.

The same wild thought kept both of the old people motionless as they watched the cattle come up the road, heard them tinklingly pass the house and saw them proceed onward to the barn.

"Who do y' s'pose it is?" whispered mam, whose straining eyes were on the man who slowly drove the cows, who let down the barn-yard rails and clodded Red Bess in, as to the manner born.

"Geordie!" gasped pap.

And Geordie it was who, with his caressing hand on the adoring hound's head, came unhastily to the farm-house, through the gate and to the porch.

Taking his hat from his head, he threw it to its habitual hook over the bench where the face-basin and soap were kept, then leaned erectly against a porch-post and looked with steady gravity at his parents who as yet had not given him a word. They were emotionally dumb.

At length: "I got to the city," said Geordie simply. Elated vision rekindled brightly in his eyes, though his voice was dull and colorless with renunciation. "I saw the buildings—big, hopeful buildings—each one maybe holding a good job for me; I saw the busy boys and girls and men and women all hurrying happily along the road I want so much to go. And all getting far, far ahead of me. Perhaps I'll never catch up!"

"I saw the trolleys rushing to places I've dreamed of day and night. The jumbled noises made me feel quiet and strong and contented; me, so tired and miserably restless in the stillness here, and I knew I had done right to come. Right, for myself. But then I kept thinking of you. Of you, pap, having to haul the water all winter, rheumatism or no; of you, mam, setting only two places at the table and maybe forgetting now and then, and setting three; so I—so I—well, I whispered, prayer-like, to my Luck please to wait for me awhile, please, and I turned my back on it. And I came back—home."

At that mam rose and threw her arms around, not Geordie, but the post nearest to her, hugging it convulsively, the glad tears pouring down her withered face.

"Geordie, boy, it was good of you. I'm so tired. I'm just beat out, Geordie. It was good of you. And I don't know when or how, but the Lord'll surely make this up to you!"

"But I," said pap, emphatically, but without irreverence, "I who ain't got His time to shilly-shally around in, I'll do something to once. I'll deed the farm over to ye, Geordie, soon as the papers kin be writ. It's supper-time, Geordie, and—bless ye!"

Color and fire leaped back into the lads eyes, and the joy of labor, not its weariness, gladdened through him. The grim acres suddenly seemed to dimple and smile at him, their master, their owner.

"Why—why—" he stammered, "maybe I won't have to go traveling for my chance. My Luck, she did more than wait; she ran ahead of me, and met me—here!"

"It's supper-time," choked pap, insistently. But he had gripped his boy's hand and was fiercely shaking it.

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Miss Selina Lue and the Soap-Box Babies

By Maria Thompson Daviess

Illustrated by Ruth M. Hallock

CHAPTER VI.—A Pin and a Proposal

"Don't you know every woman's heart is soft towards courting whether she's in it or not?"
—Miss Selina Lue.

"GOOD-MORNING, Miss Selina Lue! I jest run in to git some nutmeg, a pound of sugar and a quart of kerosene to make up some apple-pies for Mr. Kinney's supper; he do love 'em so."

"There never was such a hand as you fer pies,

Mis' Kinney, honey. I recommended you about it to Miss Cynthia not a week ago. I told her I would git you to show her how when —"

"Well, we was a-talking that over last night, me and Mary Ellen Dobbs," interrupted Mrs. Kinney, "and we think it is fine fer Miss Cynthia ter marry him, even if he is a painter; 'cause when pictures is dull he can git signs and sich to do to keep going. When will it be, Miss Selina Lue?" And she gathered the bundles in one arm and balanced the oil-can in the other hand, ready to hurry on to her home as soon as she had extracted the morsel of news that she had run upon.

"Why, Mis' Kinney, I never heard—" Miss Selina Lue's eyes were wide with astonishment.

"Well, I think it was, to say the least, disrespectful in him and her not to have told you, him a-living in your own barn and she so appearing to be loving of you all the time. I hate to think she's a deceitful girl, but I must say I did mistrust that flower-garden hat when I seen it the other day go by with Ethel Maud and Bennie Dobbs."

"I don't know what you mean, Mis' Kinney, by speaking so about Miss Cynthia. They don't nothing in this world hurt me like hearing one of my friends make light of another." And Miss Selina Lue's Irish eyes snapped.

"Well, I jest seen them setting in the door yesterday when you was up the river with the Dobbses and they was as thick as two peas in a pod, her a-laughing and him a-talking fer all he were worth. You may not know courting when you see it, Miss Selina Lue, not having ever been —"

"Mis' Kinney, child, don't you know every woman's heart is soft towards courting, whether she's in it or not—and every man's, too, for that matter, though they tries hard to hide it? It ain't only on 'count of my pitiful history with Adoniram Millsaps or your'n with Mr. Kinney that we likes to watch the doings of young folks and talk 'em over—it's borned in women

to hatch out and hover lovers' matchings, and the clucking over 'em is part of the good times of life. I was jest a-saying to—"

"Miss Selina Lue!" screamed Bennie from the Dobbs' front stoop. "Come quick, come quick; Ethel Maud's caught her hair in the grape-vine and's hanging by it. She was eating 'em! Ma's sick!"

Miss Selina Lue hurried with all the speed possible to the relief of the young Absalom.

When she returned to the grocery half an hour later Miss Selina Lue found Miss Cynthia smiling at her from the back door. Miss Cynthia's approach had been guarded, and instead of coming down the public street, she had slipped through the garden and the chicken-yard. Miss Cynthia risked no encounters with her erstwhile victim, and her movements were stealthy when approaching his haunts.

"Well, if that ain't plumb ha'nt-like, to be thinking about you and then turn round and find you a-smiling at me!" exclaimed Miss Selina Lue delightedly. "I was skeered you was clear wore out with your snack of store-keeping and baby-tending, but you put me in mind of that pink morning-glory there, always fresher and fresher every sun-up."

"And you are the sweet, warm sun that comes every morning to cheer up the little morning-glory that droops until she sees you," answered Miss Cynthia with a smile. "Are you rested from your trip?"

"That I am, honey-bunch! One day's tired never lasts me overnight. I get up every morning feeling like I have jest been cut off the bolt. You see I'm all muscle and a heap of it, but poor Mis' Dobbs has to

lift two hundred pounds out of bed every day before she can tell how she feels. But she enjoyed the trip mightily."

"Tell me all about it," said Miss Cynthia, as she sat down on her favorite place on the steps, with a cautious eye looking out for possible invasion. "Did you have a good time?"

"Yes, indeed, we did," answered Miss Selina Lue happily. "And I'm a-looking fer results in Mr. Dobbs, too. Course that kind of meeting was sorter confusing to me, as was raised under the quiet of the Twin Creek Circuit religion. The drum and the horn and the tammerine, with the rocking of the boat, seemed a mite queer. But if it suits some folks to go marching along the narrow road to the tune of a brass band, why others can follow to their salvation quieter by a pipe organ. It's the right direction and the keeping going that counts, to my mind. Salvation Army is a good name fer them devoted people, and I don't hold it agin them that they sung hymns to some dance-sounding tunes."

"You are not one bit strait-laced, Miss Selina Lue," said Miss Cynthia with an appreciative smile.

"Dearie me, child, they's a lot of trails ter Heaven, I say. But who do you think we saw up on the river road a-horseback? You had to hurry home so yesterday after I got back that I didn't git er chanct ter tell you. It was that sweet child, Miss Evelyn. She jumped off her horse, and the hired man in top-boots, what was riding behind her to keep care, held him while she come a-running over to where we set on the bank waiting fer the down boat. She were jest so glad to see us and made us all so to home, with laughing and joking with Bennie and Ethel Maud. We all had a good time fer most a hour. She let Bennie ride her horse with Ethel Maud on in front of the man. And Mary Ellen was tickled plump to death with her. Honey, she jest downright deserves to be your friend; she is so nice and sochul. It's a mighty good thing to pass one friend on to another and I thank you right

spoke to, but he forgot hisself when we was a-talking about Mr. Alan, and he told her how high thought of he is among the men up here, always ready to sit by the front doors and smoke a pipe with them of an evening. He said if he was to run for sheriff he would git the bluff votes to a man, and he would, too!"

"Then what did she say?" Miss Cynthia was feverishly eager to get at the attitude of her friend on the discovery of the whereabouts of the hunted one.

"Well, let's see. Oh, she asked if you saw him much and I told her, yes, indeed, I had left you home with him to tend the store and mind the babies. She said she was real pleased, 'cause she was sure you enjoyed each other's company— Whatever is the matter, honey?" Miss Selina Lue's exclamation of solicitude was caused by an expression of consternation on Miss Cynthia's face which was in turn caused by the sight of the artist coming from around the corner of the barn. Miss Selina Lue was unconscious of his approach; so if Miss Cynthia acted, she must act quickly. Grasping the bow at the back of her waist, she gasped, "A pin!" and vanished toward the rear of the grocery.

"In my cushion, child," called Miss Selina Lue, who thought a catastrophe threatened, and she turned to speak to Mr. Dobbs, who was coming up the street with a tin bucket in his hand, evidently in quest of some sort of provender. His errand attended to, Miss Selina Lue started back to the aid of Miss Cynthia, when she was arrested by Mr. Alan's remark that he had thought he had seen some one sitting on the steps with her. Miss Selina Lue's sense of propriety forbade any mention of Miss Cynthia and the pin, so she seated herself on the steps to await that lady's reappearance.

"Was you sick last night?" she inquired interestedly, ignoring his remark. "I seen your light burning pretty late and I hunted up the peppermint and camphire bottles before I went to bed, for I kinder looked fer you to be took down with a spell of colic. Seems as if

raw potatoes might swell in the stomik. I am sorry Miss Cynthia's cooking didn't turn out better, but of course she meant it for the best. Cooking don't always come to a woman young in life; it has to be sorter lived to by experience." Miss Selina Lue spoke in an ordinary tone of voice, for she was under the impression that Miss Cynthia had retired to the little bedroom, and she could see that the door was shut. In reality the culprit was seated on a box of cans behind the molasses-barrel, well within range of the conversation.

"Why, Miss Selina Lue, I thought it was an uncommonly fine dinner. I am sure it was sweet of her to bother about me at all," answered the victim loyally. Miss Cynthia's heart gave a funny little start and then glowed in an inexplicable way; she had expected something different from him, perhaps. The situation was one that might have been treated humorously.

"Mr. Alan, I am afraid it was Miss Cynthia you was tasting instead of the dinner, 'cause the looks of what was in the dish and hid away in the frying-pan under the stove was enough fer me. Bless her heart! I don't guess there was any dog handy you could

have throwed it to, so you had to eat it up to save her feelings."

"Well, my feelings were those of gratitude, I can assure you, Miss Selina Lue, and if you ever want to go away again, just leave the babies and me in the same hands; we like them, those hands."

"That's just like your good feelings, Mr. Alan. We was a-telling Miss Evelyn Branch about how you was friendly to every man, woman, child, dog and baby on the bluff."

"Everybody has been so kind to me that I feel like I had lived on the bluff all my life," answered Mr. Alan with positive emotion in his voice.

"We all wish you could settle right down here with us for life. Of course we won't ever have money enough to make the picture trade brisk, but Mr. Jim Peters was a-saying the other night he most knew he could git you a job with the 'lectric company to help out. You would have all our recommends fer anything you wanted to git."

"Miss Selina Lue," Mr. Alan's voice was low and very gentle, "I may ask your recommendation some day about something—I want—very much. I—I am—afraid—"

"Law, Mr. Alan, don't feel that way about Miss Cynthia! She ain't nothing but a mite shy of you, and I ain't got a bit of doubt that she's jest a-waiting fer you to pop the question. For my part I always held with a little waiting in girls. Minds made up too quick are mighty apt to unmake, same as a garment sewed with a red-hot needle and a burning thread is liable to come to pieces."

[CONTINUED ON PAGE 31]



"'Lands alive, if there ain't Mis' Tyne and the whole family come back!'"

here fer passing that child ter me, and I'm going to hold her to me tender."

"Well, I know it gave her the greatest pleasure to see you. I wish I had been there."

"We all wished fer you and we told her all the news about you. Then we told her about Mr. Alan and the pictures, and I invited her to come out to-morrow evening and see 'em and have Mr. Alan explain 'em to her. We can have one of them kinder afternoon parties fer her. I thought about making up some buckets of lemonade and having some of Mis' Kinney's apple-pies. Won't you be glad to see her?" Miss Selina Lue's delight was something wonderful to behold as she unfolded her plan to the paralyzed young woman beside her.

"What did she say?" Miss Cynthia at last managed to ask.

"She said she would be delighted to come and she was sure you would be glad to have her. And, Miss Cynthia, what do you think? She knows Mr. Alan—got 'quainted with him somewhere last winter. Now won't he be pleased to meet a old friend? Maybe she'll invite him to a party over to her house. I am so afraid he gits lonely sometimes with jest us."

"I am sure she will be—kind to him," answered Miss Cynthia with great self-control. Evelyn's merciless badinage already sounded in her ears. Why, oh why, had she withheld that information about the lair of the lion on the morning of Friday the thirteenth?

"I know she will, too," Miss Selina Lue broke in on her criminations of herself. "'cause we all give him sich a good name. Mr. Dobbs was some mortified at first and got red and couldn't hardly answer when

Our Puzzle School

Conducted by Sam Loyd

PUZZLES should be considered and treated from an educational standpoint for the reason that they constitute a species of mental gymnastics which sharpen the wits, clear fog and cobwebs from the brain and school the mind to concentrate properly. Comparatively few people know how to think properly. As a school for mechanical ingenuity, for stirring up the gray matter in the brain, puzzle-practice stands unique and alone.

See how the average boy, who abhors square root or algebra, will find delight in working out puzzles which involve identically the same principles. Millions of earnest students who would really have loved to learn, have been abandoned as incorrigible blockheads, because those who had charge of their education did not know how to interest them in their studies. An aversion to figures and a desire to forget all about mathematics as soon as one leaves school is almost universal, and yet, if the subject had been taught in a more congenial way, the mathematical and inventive bumps might have developed in a way to astonish the family phrenologist.

Scores of noted scientists, like Tyndall, Huxley, Humboldt, Darwin, Edison, Bacon, Euler, Herschell, Proctor and others, were pronounced puzzlists in their early days, so, upon the axiom that "the bend of the twig imparts the incline to the tree," it is safe to say that their early puzzle training gave the bent to their minds which later inclined them to grapple with problems of greater magnitude.

If parents desire their children to be bright and companionable, let them study puzzles, tricks, rebuses, conundrums and the like. There are no stupids in the world of puzzlement, but if you go outside of the ranks and propose a simple query which the trained puzzlist would solve in a flash, its advantages will be forced upon you.

Note the worried expression on your friend's face if you ask him to define the relationship of the man who, apostrophizing a portrait, exclaimed, "Brothers and sisters have I none, yet that man's father was my father's son." Or the equally bewildering assertion of the young society lady: "That gentleman's mother is my mother's mother-in-law."

I have noticed that successful men are correct and apt at mental arithmetic, whereas the average mortal is sadly bewildered by propositions which require a little thought to aid the pencil and paper.

Some problems are made more difficult by a certain rhythmical jingle, which may be likened to the confusing noise of a boiler-shop, as, for example, when the deacon's wife, who was a very cautious and calculating woman, thought of making a little venture in the poultry line, she asked the good deacon: "Now if ten henpens cost ten pence, and ten hens and one henpen cost ten pence, what will ten hens without any henpens cost?" It is also related how she questioned the statement of their son regarding the prowess of the family cat. She asked: "Now, Tommy, if it takes seven cats seven minutes to kill seven rats, how many cats would it take to kill a hundred rats in fifty minutes?"

Even the popular "snares for the tongue," like the historical story of Peter Piper and his many pecks of pickled peppers, may be utilized to sharpen the wits and cure hesitancy of speech. Here are a few tongue-twisters:

Six thick thistle sticks.
Flesh of freshly fried flying fish.
The sea ceaseth and it sufficeth us.
High roller, low roller, rower.
Gaze on the gray brigade.
Strange strategic statistics.
Give Grimes Jim's gilt gig whip.
She says she sells sea shells.
A cup of coffee in a copper coffee-pot.
Say, should such a shapely sash shabby stitches show?

Sarah in a shawl shoveled soft snow softly.

Smith's spirit flask split Philip's sixth sister's fifth squirrel's skull.

A box of mixed biscuits, a mixed biscuit box.

Strict, strong Stephen Stringer snarled sickly six sickly, silky snakes.

Swan swam over the sea. Swim, swan, swim. Swan swam back again. Well swum, swan.

It is a shame, Sam; these are the same, Sam. 'Tis all a shame, Sam, and a shame it is to sham so, Sam.

A glowing gleam growing green.

A bleak breeze blighted the bright bloom blossoms.

Susan shines shoes and socks; socks and shoes shines Susan. She ceaseth shining shoes and socks, for shoes and socks shock Susan.

Young people take delight in puzzles which employ pennies, buttons, scissors, strings, matches, pencils or such things as pertain to the household, and any one with a good repertoire wins their hearts. In fact, one clever trick, as a stock in trade, with the happy faculty of showing it off to good advantage, is quite an accomplishment, and will make a fellow popular and pass as a genius for a whole lifetime.

There is an unlimited demand for original puzzles, and a good one will command almost any price for advertising purposes.

No better elementary puzzle could be shown than the following illustration of the famous Magic Square:

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | 5 | 6 |
| 7 | 8 | 9 |

Change the positions of the nine numbers, and arrange them so as to add up the same amount in eight different directions. A second puzzle is to take away eight of the matches which form the nine squares, so that there will be but two squares left.

A Charade

I needed *three* and *four*,
And started for the door,
Thinking I would go for a *three*, *four* and *five*.

I had not gone a square,
When by chance I *total* there,
By which I mean, you know, my one, two, three, four, five.

The Cashier's Problem

Any bank cashier could tell some interesting experiences which occur to enliven the routine of ordinary business, and of some pretty problems of a very puzzling nature. What would you do, for instance, when an old gent, who, like



the majority of mortals, is averse to figuring, pushes in a check for two hundred dollars and says, "Give me some one-dollar bills, ten times as many twos and the balance in fives!" I say, what would you do?

Concealed Geography

In the following sentences the name of some town or country is concealed between two words. The answer to the first one is "Constantinople." Now, see if you can guess the others.

1. There is one thing you should be constant in—O, plebeian!
2. The empress regent thinks she is a Maria Theresa.
3. Old wine, old books, old friends are the best.
4. Jump on, are you all on, don't forget the baby.
5. He used a new preparation for his teeth.
6. They say that our small dog is dead.
7. I galloped to Lynn and met Zechariah galloping back.
8. Lord Bacon was a great thinker many years ago.
9. King Alfred, in burgher cloths, burnt the cakes.
10. O, mighty Tiber, gently flowing to the sea!
11. No knowledge, no attainments, can take the place of goodness.
12. The crown prince can even balk a Napoleon.
13. The amber lining of her coat was all faded.

Fifty prizes of puzzle books will be awarded to those sending the best answers to the puzzles. Address answers to Sam Loyd, Box 826, New York City.

A New Year's Message

[CONTINUED FROM PAGE 20]

they carried all the seeds and strewed them far and wide. But again when the Master came He could not find the flowers He loved best of all, and He said, "Where are those, my sweetest flowers?" And the Prairie cried sorrowfully, "Oh, Master, I cannot keep the flowers, for the winds sweep fiercely and the sun beats upon my breast, and they wither up and fly away. Then the Master spoke to the lightning, and with one swift blow the lightning cleft the Prairie to the heart. And the Prairie rocked and groaned in agony, and for many a day moaned bitterly over its black, jagged, gaping wound. But the Little Swan poured its waters through the cleft and carried down a deep black mold and once more the birds carried seeds and strewed them in the canyon. After a long time the rough rocks were decked out with soft mosses and trailing vines, and all the nooks were hung with clematis and columbine, and great elms lifted their huge tops high up into the sunlight, and down about their feet clustered the low cedars and hemlocks and balsams, and everywhere the violets and wind-flower and maiden hair grew and bloomed till the canyon became the Master's place for rest and peace and joy.

Let God remake you. Let the Master have a share if you would make the most of yourself and your life be adorned with love, joy, peace, gentleness, self-control. Some of these bloom in the open, yet never with so rich a bloom or so sweet a fragrance as in the canyon.

Finally, then, you will want to make the most of yourself

As You Hope to Be

Have an ideal. You have thought of this before, but have you done anything about it? Only the definite ideal is helpful. Choose your hero. Look to some goal. Why not now, in 1910, at the threshold of the New Year? Be very sure that your aim is the highest—something above you, something that calls for your courage, your self-reliance, your manliness and some noble endeavor which will exalt and complete your being.

Many try to make use of what comes to them. A host labor incessantly, and yet life may seem to them an insipid thing with its every-day perplexities and burdens and only an occasional pleasure. The failure is the absence of a worthy ideal—and that ideal is the message I desire to bring to you for the New Year—the ideal of service for Christ, for our fellow-men and for heaven; for it is this high resolve which will reward devotion, which will ennoble opportunity, which will sweeten toil and fulfill the purpose and the hope for which we live.

Riddle Bee

A SPLENDID game for a winter-night's party is a Riddle Bee. To prepare for it, the entertainer gathers up in advance of the party all the conundrums, old and new, which she can collect and makes a list of them. Old favorites, such as "How many P's in a pint?" or the historic nursery catch about the pump-handle, are quite as good as the most recent riddles for the purposes of the game, though a new one that no one has heard as yet adds to the evening's fun.

To play the game, the company is ranged in a row as if for an old-fashioned spelling bee.

The hostess is teacher and propounds the riddles to be answered instead of giving words to be spelled. Those who answer correctly go up, and those who fail go down, and the person who stands "at the head of the class" when the list of conundrums is exhausted wins the game.

Stag Tag

FOR this merry romp, two short dowel rods or sticks are decorated with "shoo-shoos" of shredded tissue paper. The player who becomes "It" takes one wand in each hand and thus armed sallies forth to capture other players. This is done by tagging them lightly with one or the other of the wands. As soon as any player has been tagged he joins hands with the person tagging him and takes one of the shoo-shoos in the unoccupied hand.

A third person tagged by either of these two joins hands in the same way and so the fun continues until a long unwieldy line is working its way around the room in pursuit of one nimble player, bent on giving his pursuers a merry dance for it.



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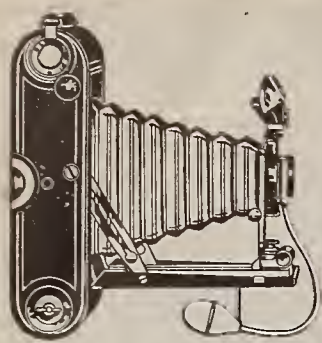
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Our Girls at Home



The Unkind Letter



THE connecting door was just ajar and the muffled sounds of half-stifled sobs reached the mother's ear in the kitchen. The shades of evening had drawn a filmy curtain over the windows of the sitting-room, wherein there sat a dimpled little sixteen-year-old lassie with face buried in the bend of a soft white arm resting on her writing-table, sobbing out her grief.

"What's troubling my little girl?" and there was anxious solicitation in the quiet voice of the mother as she lay her hand gently on the bowed head and stroked with loving tenderness the wavy mass of brown tresses. "There, there, dearie!" and there was a soothing calm in the mother's voice; the heart-healing balm that we all of us, boys and girls together, have known sometime.

"I'm—I'm just so mad I can't talk about it! It was just horrid of her!" "Why, girlie! This isn't like you one bit. Surely this isn't my sweet-tempered little girlie! She doesn't act nor talk like this," and mother's loving lips are kissing away the fretful tears of girlish passion.

"I'm sorry, mama, dear. But I'm not cross with you. It's Carrie—she told Fred that I bragged that I could take him away from her—just because I went with him to that social while she was away visiting. I never will speak to her again!"

"Are you sure—real sure, girlie, that she said all this? You and Carrie have been such loving comrades all your lives that—why, I just can't think it of her! Who told you, dear?"

"Mabel told me, and she was so sorry for me that she could have cried. She likes Fred herself, but she wouldn't be so mean as to talk that way about anybody, she said; even if Fred did like them better."

"So! Mabel told you? Well, now, dearie, you know that sometimes Mabel—makes mistakes."

"Oh, but, mama, this is true. Mabel said she would face her in it if I wanted her to. Oh, but I'm going to write Carrie a letter that will make her ears burn. I'll just tell her what I think of her for saying such awful things about me."

"All right, dearie," and a knowing smile passed over the mother's face as she stooped to place her arms about her daughter's shoulder, "and now is the time to write it; now, while you are in the mood and can unburden your whole heart and mind in the letter."

The girlish head was raised, and questioning eyes sought her mother's face to learn if she really meant it.

"Yes, dearie, I am in earnest. I will leave you so you may write it now. When you have finished, bring it to me, and I will see that it is delivered to the proper person."

And such a letter as Bess forthwith wrote to Carrie! It was of a temper and tone sufficient to make the angels weep.

The letter written, the envelope addressed, she carried it to her mother; a smile on her face and a satisfaction in her heart that she had wrought so well. She had said some bitter things that would burn deep into the sensitive mind of her old-time school friend.

"And now, dearie, you feel better, don't you, since you have relieved your mind of its anger? Go for a walk now and leave the letter with me; I will attend to it."

Two days later Bess learned through another friend how Mabel had deliberately told her a falsehood of Carrie, and another of her to Carrie, and all for one purpose—to embitter the friends; with the hope that Fred would desert them both in their quarrel, and afterward transfer his attentions to her. Then it was a sad-eyed little girl indeed that came to lay her head on her mother's lap.

"Oh, mama, mama! Carrie will hate me now! There was not a word of truth in what Mabel told me, and—and I went and wrote that awful, horrid letter. "Girlie,

did you think that I had you write that letter to send to Carrie? I had you write it simply to cleanse your soul of anger. I said I would deliver it to the proper person, and I did—to your father, and—after he had laughed a bit and said that you were 'so like your own dear mama'—he burned it. And now remember this, Bess, that unkind letters are always only to be written, but never, never to be sent to whom they are written." "Oh, you dear, sweet mama, you've taught me a lesson that I never will forget—and I'll never, never write another unkind letter to any one, no matter how vexed I may be!"

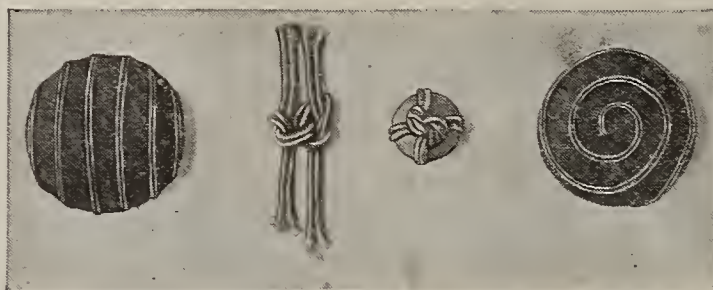
Hand-Made Buttons

Now that buttons are so fashionable. Every girl who cares for distinctiveness in dress will want to trim her new suit with the newest style button. Of course, like all good things, the new buttons are more or less expensive, but the clever girl need not worry, because she can easily make some for herself from the three designs given below.

The first one is a broadcloth-covered button, ornamented with parallel lines of narrow soutache braid.

No. 2 shows a small button with two single knots interlaced at the center and pulled tightly together. The illustration here given is self-explanatory.

No. 3 is a broadcloth-covered button ornamented with a simple spiral of sou-



No. 1

No. 2

No. 3

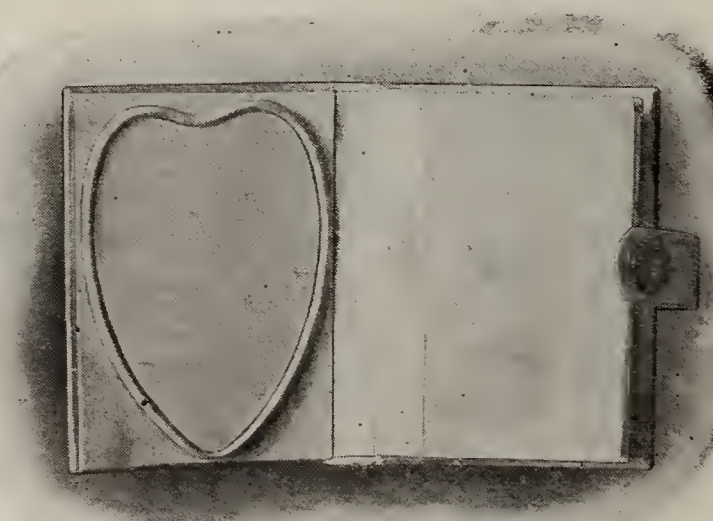
tache braid. Where the spiral begins at the center, force the braid through the wrong side of the broadcloth in order to obtain a neat effect.

The braid is not very hard to sew on, and after you have made one or two buttons you will be surprised to see how quickly the work progresses.

Have any of you girls ever seen the new ribbon belting stamped to embroider? It is just as attractive and dainty as can be. The belting is of white silk moire ribbon, and on the back a flower design is stamped. It is embroidered in very narrow silk baby ribbon which comes just for this purpose. It is such simple work that any girl will like to do it herself.

Vanity-Case

A VANITY-CASE has come to be one of a girl's most important accessories. She realizes how unattractive she looks when her nose and cheeks are shiny. So instead of scorning the use of powder, as she formerly did, she looks upon it



New Vanity-Case

as a dire necessity. Many girls used to carry little powder-bags, but since this novel vanity-case has been put upon the market, the powder-bag has had to relinquish its claim to a place in the young girl's hand-bag. This little book or case is covered with delicate pink satin and contains one hundred powder leaves and a white celluloid heart-shaped mirror. It closes with a brass button clasp, and may easily be slipped into the pocket of one's coat or in one's hand-bag.

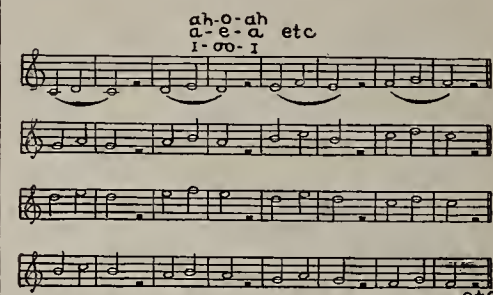
Talks on Vocal Culture

Part IV.

By Benjamin Schwering

IN THIS article we will take up the vowels, long "I," pronounced as in "fine," and long "oo," pronounced as in "tool." The vowel sound "I," is formed of the two sounds "Ah" and long "E," thus "I" is sung as "Ah-E," when said quickly.

Put your mouth in the exact shape for "Ah," only let the "E" sound come very



quickly at the end of the tone. Give most of your attention to "Ah." You will find that the chin and tongue readily take the position for "E" at the end of "Ah." This is a much prettier and easier way to sing "I" than if we gave it the hard, flat sound of "I."

The tone must be directed just a little in front of long "E."

In the vowel sound "oo," pronounced as in "cool," the lips are pushed farther forward than in any other vowel. The opening of the mouth should be very small, both sets of teeth being close to each other. Be sure that you push them out far enough. The tongue takes the same position as for long "O" except that the tip turns up slightly instead of resting against the lower gums. Direct the tone out upon the lips.

As the vowel sounds are the only ones on which we can vocalize or produce a singing tone, I wish to impress upon students the importance of studying the directions given for singing them carefully. Keep on trying until you get the right positions. Use a mirror in front of you until the formation of the sounds becomes second nature.

So many singers fall into that disagreeable habit, the tremolo. A good many do it unawares and it becomes such a habit that they cannot control it. However, the most prevalent reason is because some people are foolish enough to imagine that a tremolo is pretty. This is absolutely wrong. It is neither pretty nor artistic, and musical authorities regard a singer using it with nothing short of contempt, saying it is a weakness. Aside from this it is ruination to the voice, and a person who practises it will have but a short-lived voice.

Whenever a person sings with a tremolo through his voice it is a sign that too much air is pressing against the vocal cords, causing the voice to tremble. As you know the vocal cords are two little sensitive bands that produce tone by the air being forced through them. Since these little bands are very sensitive, they cannot stand any strain not properly theirs. So when too much air is pressing against them as in the tremolo, it stretches them causing the little bands to relax their tension. Thus, if the tremolo is continued for any length of time the vocal cords will be so stretched that they will not regain their original tension, thus affecting the quality of the voice. It is especially prevalent with big voices.

Be careful to hold your voice firm and steady when singing. Only a small amount of breath should be streaming through the vocal cords and this should flow steadily. In singing, the sensation should be more as though the breath were held in. Always keep the chest well expanded while sustaining a singing tone or phrase, for it is impossible to sing right if you do not. Given above is an exercise on three notes. All three notes must be sung in one breath. Sing the exercise through first on one couplet (like "Ah-O-Ah"), and then on another as you will find marked above it.

The first of this series of articles appeared in the October 10th number.



Madison Square Patterns



THERE is no doubt that to be fashionable one has to keep up to the mode in skirts. The skirts of our gowns seem to be continually changing, and the changes are decidedly radical, so look well to your new gowns.

A practical and yet fashionable skirt model is illustrated on this page, and from the one pattern two different skirts can be made. The one which is shown in the front view has a deep gored yoke and a plaited flounce. The other, which is pictured in the back view, has the same yoke, only that it is made with a

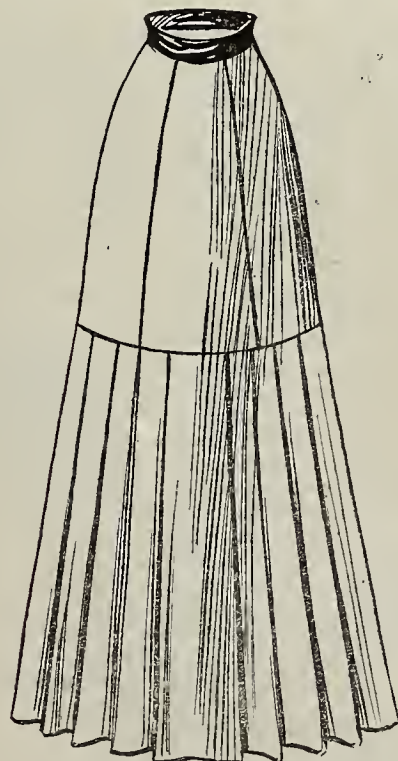


No. 749—Princesse Petticoat

Pattern cut for 36, 38, 40 and 42 inch bust measures

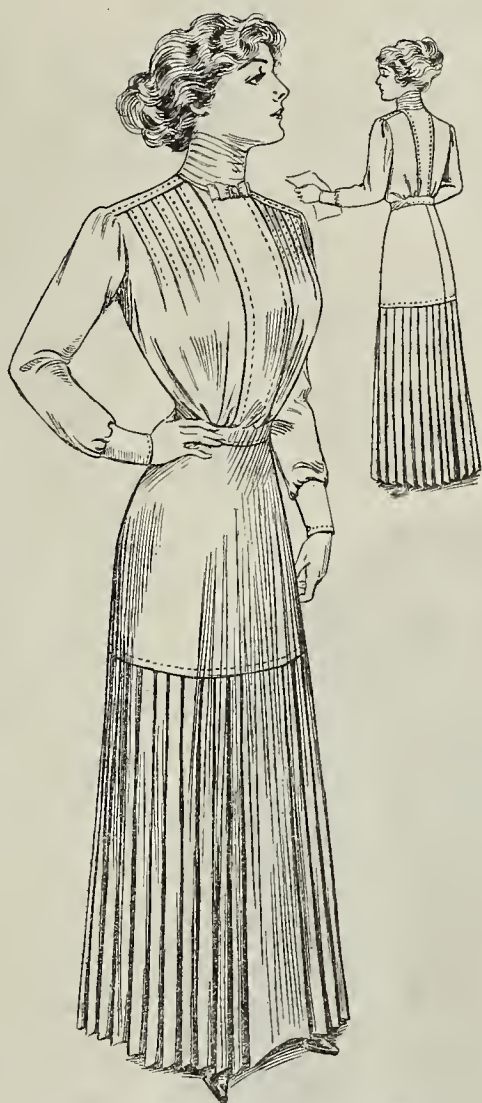
Habit back effect and the lower portion is gathered instead of being plaited.

In making this skirt in either style, it is imperative that the yoke fits perfectly. Its depth must depend somewhat upon the individual figure, but most of these deep yokes are at least one third of the skirt length. Some are of circular shaping, fitted with darts at the waist and closing in habit effect at the back. Others are cut in three, five and seven gores and have inverted plaits at the back. This latter style is the one generally preferred by the woman who wishes to follow the fashions, but does not care for extremes in style.



No. 1415—Yoke Skirt With Plaited or Gathered Flounce

This is the skirt pattern which may be developed in two ways. Here is the front view, showing the yoke with inverted plaits at the back and finished with a plaited flounce. Pattern is cut for 22, 24, 26, 28, 30 and 32 inch waist measures



No. 1417—Tucked Shirt-Waist With Shoulder Yoke

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures

No. 1369—Kilted Skirt With Yoke

Pattern cut for 22, 24, 26 and 28 inch waist measures



No. 1284—Plaited Tailored Shirt-Waist

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four yards of twenty-four-inch material, or three yards of thirty-six-inch material

Plain shirt-waists in this tailored effect keep right on being in style.



No. 1456—Wrapper With Princesse Back

Pattern cut for 34, 36, 38, 40 and 42 inch bust measures



No. 1201—Shirt-Waist Tucked in Clusters

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures

FOR afternoon dresses, which can also be worn for church socials or informal evening parties at home, materials having a crêpe weave are very much the fashion. Crêpe de chine keeps right on being the vogue and satin-surfaced cloths which have a crêpe texture. The new voiles are prettier than ever and come in many different designs. Voile showing a satin stripe in self-color makes a very effective costume. For a gown of this sort, black is really the safest color to choose.



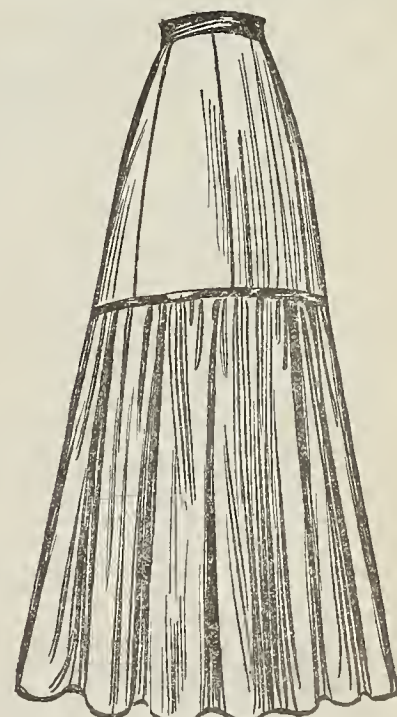
No. 1394—Full Waist With Puffed Sleeves

Pattern cut for 12, 14 and 16 year sizes

No. 1395—Gathered Skirt With Panel Front

Pattern cut for 12, 14 and 16 year sizes

THE young girl who wants a party dress which will not only be fashionable this winter, but next year as well, will find just this type of costume in the design illustrated on this page in patterns No. 1394 and No. 1395. The model is really a practical one as well as a pretty one, because it can be worn as a summer afternoon dress developed in flowered lawn, quite as well as an evening costume. Voile is an attractive material to use for this dress with either silk embroidery or lace for the trimming. The full waist is gathered to form a heading which makes a pretty finish for the deep yoke, and the sleeve is an especially new design. It is divided with a band of trimming to form a double puff. The waist pattern may also be used for making a separate lingerie waist having the yoke of all-over Swiss embroidery.



No. 1415—Yoke Skirt With Gathered Flounce

This skirt shows another way of developing pattern No. 1415. This is the back view of the skirt, showing the yoke portion closing in habit effect, having the flounce gathered. For soft materials, such as cashmere, this is an especially attractive skirt model to use



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OUR YOUNG FOLKS' DEPARTMENT



Molly Bentley's Secret

By Mary Minor Lewis



MOLLY and her step-mother were all alone on the farm. Winston and Dick, her two brothers, were off at boarding-school, and her father had started that morning for Essexville, the nearest town, where he would have business at the court-house for several days.

Molly, being only ten, had lessons every morning with her step-mother, and after doing

her house duties she had the afternoons to herself.

It was a lovely day in early October, and after she had tidied the dining-room, fed the cats and led her pony from the lawn into the barn-lot, she took her favorite story-book and went down to the grove of willows beyond the meadow brook. She chose, as a pleasant place to read, the sunny side of one of the enormous straw-stacks beyond the willow-grove. Making for herself a comfortable nest, she took off her hat and opened her book. She became at once so interested in the story of a runaway Princess that she did not hear steps approaching. She looked up startled, and jumped to her feet as a man's voice said:

"Sh—sh! Do not cry out, I beg of you! I will not do you any harm!"

Molly remained standing, her heart beating wildly.

Before her was a man of perhaps fifty years of age. He was bare-headed, his hair cut very short, and his clothes so filthy that one could not tell what color they had originally been. But in spite of his mud-stained, loose-hanging suit there was a certain dignity about the man. His eyes were blue and kindly. There were deep lines of suffering on the man's face and dark shadows under his eyes.

"Little girl," he said, "can you keep a secret?"

"If it is one I ought to keep," replied Molly stoutly.

"Then I will tell you mine, and I will leave it to you whether or not you will help me and keep silent. I have been watching you from the willow-trees where I have been hiding without food for two days. Yesterday you were here, but your dog was with you and I did not dare to move. All day I have been waiting, fearing that you would not come."

"You look sick, and, oh, so tired!" exclaimed Molly. "Tell me what is the matter and why should you hide?"

"Over the border, in Kentucky," said the man, "there is a prison where I have been shut in for ten years of my life, caged like an animal, and for a crime I did not commit! Some day the world will know that I am innocent, but now I am a fugitive, an escaped convict, with a price upon my life!"

Molly's face went very white, but she did not move. The man drew from his pocket a much-crumpled letter. "Read that," he said, as he put it into Molly's hand.

Winton, West Virginia, September 20th.

I send this letter to you, my dear husband, secretly by a good sister who has access to your prison and who will put it into your hand. All these weary years I have been waiting for you, praying the good God that justice might be done, and the guilty one confess. But Richard, my strength is all spent, my health and my heart are broken else I could not thus add to your suffering, knowing your helplessness. If I might only see you before I die! If I need not leave our child all alone in the world, I could go in peace. Richard! Richard! Across the years and the miles that stretch between us I cry to you: "Come, come quickly before I die."

MAGGIE.

When Molly finished reading, tears were in her eyes. "I will help you," she said. "Tell me what I can do."

"First," said the stranger, "I must have food. Then, although I have soaked my prison clothes in the black mud of the swamp, they would betray me anywhere; I dare not venture into the open road."

Molly's brain worked rapidly.

"After supper," said she, "my step-mother is going down into the village. I will come back here then and bring you something to eat, and I will find some clothes."

The man thanked her, and tears welled up in his eyes.

That evening as soon as Mrs. Bentley had gone, Molly packed a basket with food.

Then she ran up into the attic. She took from an old trunk the clothes which had been packed away there since Uncle Charles died. She rolled them into a bundle, but it was so big and heavy she decided that she must

their Sunday-school teacher had given to Molly and her brothers to put their offerings in for the missionaries. "The sum of the contents of all three boxes will be enough for a ticket to Winton," said Molly to herself.

When the little girl arrived at the man's hiding-place, he had finished his supper and looked much refreshed. He gratefully took the clothes, but when she showed him the mite-boxes he hesitated and his face flushed.

"It seems such a shame," he murmured brokenly, "and yet I suppose I must, child," he said, "remember this saying, 'Cast thy bread upon the waters, for thou shalt find it after many days.' Some day when you are older you will come to know what the words mean, and so, brave little girl, good-by!"

Molly went slowly back to the house. The fugitive waited until it was quite dark, and then stole down to the creek and bathed himself and put on the clothes that had belonged to Molly's Uncle Charles. Then he walked along the turnpike, and boarded the first train which took him to his dying wife.

And Molly? Did she keep the secret entrusted to her?

When Mrs. Bentley found that the mite-boxes were missing, she was very angry and asked Molly if she knew what had become of them. And Molly would not tell a lie.

"I know," she answered bravely, "but I cannot tell."

Her step-mother threatened punishment, and Molly was very miserable, but she would not break her promise.

Finally she said very angrily, "I shall write to your father and tell him that you have stolen!"

This seemed more than the little girl could bear and she broke down, weeping bitterly. She worried so much wondering what her dear father would think when he received her step-mother's letter, that she became quite ill.

The doctor came, felt her bounding pulse, took her temperature and looked very grave.

"The child is under some extreme nervous excitement," he said. "I must know what it is before I can help her."

So Mrs. Bentley told the doctor all about the disappearance of the mite-boxes and of Molly's refusal to tell what had become of them. When she had finished, the doctor turned to the little girl and said:

"Tell me, Molly, all troubles grow less with the telling."

But Molly only began to cry again and to say over and over, "I did not steal. My father would not call it stealing." The doctor quieted her as best he could and then drove down to the village and telegraphed for Mr. Bentley.

The next morning, right after breakfast, there was a quick step on the stair and Molly's father walked right in and took his little girl in his arms.

"Oh, father," cried she, "I would tell you if I could—"

"Hush, my dear, dear child," he said very tenderly. "I do not want you to tell me! I trust you always. I want you to forget all about this miserable business and get well and be my own happy little girl again."

"Why, daddy," she cried, "You are crying yourself! Your eyes are all wet!"

And then they both laughed and held each other closer still.

A year later the guilty man, for whose crime Molly's tramp had suffered ten years of imprisonment, confessed upon his death-bed; and he whom Molly had helped was free once more in the eyes of the law, restored to his honorable place and again in possession of his property.

Then one day a registered package came to the Bentley's door addressed to Molly. With great curiosity, she opened it and found a dainty little blue plush case, and in it the loveliest gold watch! On the inside was engraved her name and these words:

"To a Brave Girl Who Kept a Secret."



"She chose, as a pleasant place to read, the sunny side of one of the enormous straw-stacks"

make two trips to the straw-stack. So, remembering how hungry the man must be, she took the food first.

While he was eating, she hurried back to the house for the clothes, and on the way she wondered how, with no money, the poor man could get to such a far place as West Virginia.

When she reached home, she went into the dining-room and took from the mantelpiece the three mite-boxes that

Cousin Sally's Letter

DEAR BOYS AND GIRLS:—

I don't know whether you like to hear about people and customs in other lands, but somehow this subject has interested me from a child. I am especially interested in Japan, and I thought you might like to have me tell you a few things about this flowery, picturesque country—the Land of the Rising Sun.

The houses are of light framework structures and they have no windows like ours. Instead the walls are built in sliding sections called "amando," which are rolled at night, and in the daytime stowed away in boxes. The rooms are partitioned off with opaque paper screens called "fusuma," which slide along on grooves. In this way two rooms may be thrown into one big room.

If you should visit a Japanese house you would find no tables, no chairs, no beds, no piano, no stationary wash-stands, nor the thousand and one necessities that we could not do without. Just imagine how queer it would seem to sit on the floor tailor fashion and eat your dinner from a little lacquer tray. Then you would have to leave your boots at the door before entering the room. And I don't think we would like to sleep on the floor the way they do, especially on cold winter nights. They merely find a soft spot on the floor mats, throw down a quilt or two and roll themselves up in a rug or blanket. A wooden block covered with a roll of soft white paper or cotton wadding serves as a pillow.

The Japanese boys and girls are everything that suggests refinement and gentleness. This is because their mothers train them properly from the cradle. One of the first things a mother teaches her children is self-control. If baby wants something and can't have it, he is taught not to cry and make an ugly face, that would look badly before people; and if he is happy and feels unusually good-natured, he is not to laugh too loudly nor make too much noise, that would be vulgar. The boy is taught that he owes the strictest duty to his parents and to his

Emperor, and he never, no, never, forgets these obligations. I must tell you about the funny little story that I read not long ago. The Japanese salutation for "good-morning" is "ohayo," pronounced "o-hie-o." Well, once an American minister went to Japan, and on his arrival the people greeted him with cries of "Ohayo! Ohayo!"

"Exceedingly clever people, these," he remarked. "How did they know I was from Ohio?"

Then there is another story about a lady visitor in Japan who asked how to say "good-morning" in Japanese. She was told "Ohayo." "Why, that is very easy to remember," she replied, "because it's the name of one of the states in my country. Next morning she met the same man who had told her. Leaning her head out of the jinrikisha, she cried, "Mr. Fushimi, Illinois! Illinois!"



Three little Japanese ladies amusing themselves

The boy's and girl's style of dress is almost alike. They wear a loose gown called a kimono, and under the outer kimono there is an inner kimono, and the garments are drawn tightly around the body with a large sash called an "obi." The obi is the pride of a girl's heart, and if her parents are rich she has an obi of shining, costly silk or cloth of gold. A boy's obi is not so elaborate.

Just think, there are no pockets in the Japanese dress! Whatever, would you boys do with your marbles, your penknife, buttons, cord, whistle, tops and the hundred and one things that are stuffed into your pockets? If the Japanese boys have anything to carry, it is tucked into their sash or into the sleeves of their kimono. But now I want to speak about this charming picture. Two Japanese girls are playing samisens, a three-stringed banjo with a long neck and small square head, while the girl standing is dancing the fan dance. The samisen has a very unpleasant twangling sound, but the more it is heard, the more it grows upon one, for there is a certain fascination about it, as there is with all oriental music. The girls' voices are very nasal and pitched very high.

Write and tell me if this letter interested you, for if it did I would be glad to tell you about other lands.

Write to me soon and remember that there are hundreds of club buttons here in my desk ready to be sent to boys and girls who wish to join Cousin Sally's Club.

Wishing you all the happiest of New Years,

Faithfully always, COUSIN SALLY.

Monthly Prize Contest

OUR prizes are for the best copies of the picture illustrating "Molly Bentley's Secret." Make your drawing larger than the original and use any medium you choose. For the five best drawings we will give prizes of books and post-card albums. Write your name, age and address on back of drawing and send it in before February tenth. The contest is open to all boy and girl readers who are seventeen years of age and under. Address Cousin Sally, FARM AND FIRESIDE, 11 East 24th Street, New York City.

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MACBETH, Pittsburgh.

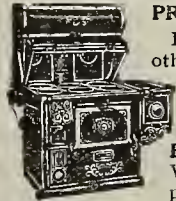
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The Housewife's Club

EDITOR'S NOTE—This department has been introduced for the special purpose of helping the women readers of Farm and Fireside in all problems pertaining to the household. Monthly we offer prizes as follows:

Two dollars for the best description and rough sketch of an original, home-made household convenience or labor-saving device; \$1.00 for the second best; while 25 cents will be given for all household hints and recipes that can be used. This month's competition closes February 10th. Contributions must be written in ink, on one side of the paper, and must contain not more than 250 words. We would suggest that contributors retain copies of their manuscripts, as no contributions will be returned. Address "The Housewife's Club" Care of Farm and Fireside, Springfield, Ohio.

Buckwheat-Cakes

DISSOLVE one cake of yeast in a quart of warm water. Add a teaspoonful of sugar, a cupful of wheat-flour and enough buckwheat-flour to make a nice batter. Set in a warm place and let rise for several hours. Just before frying them, add a level teaspoonful of soda, and salt to taste dissolved in a little warm water. A little of the batter may be saved and used instead of the yeast for starting the next batch. Sweet milk may be used instead of water.

MRS. J. L. R., Ohio.

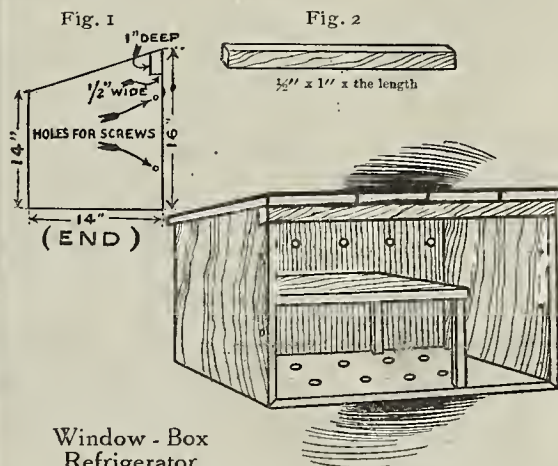
To Keep Grapes All Winter

HERE is a useful hint which our readers may wish to have: Pack the grapes in glass jars, leaving the grapes on the bunch. Then fill the jars with sugar, screw lids on tight and bury in sand in a cool place. Another way is to pack the grapes in bran in the same manner. When wanted, cut off the tips of the stems and soak stem end in claret to freshen.

MRS. T. B., California.

Window-Box Refrigerator

THIS household article is perhaps the most convenient thing I own. In it I keep meats, butter, vegetables, milk, etc., and you have no idea how much time and climbing of steps it saves. It should be made the right length to fit in the outside window casing and is fast-



Window - Box
Refrigerator

ened to the casing by two screws in each side of the box.

Figure 1 shows how the two ends should be cut out of three-quarter-inch boards. The roof, the back and the bottom are made from boards three eighths of an inch thick. The roof is made to come flush with the sides. The shelf is twenty-two inches long and is nine and one half inches from the bottom. It is nailed to the back and one side, and the outside right-hand corner is supported by a small post one inch by one inch by nine inches.

Figure 2 shows the size of the board which supports the roof in the front of the box. It is one half inch by one inch by the length of the box. Holes are bored in the back and the bottom of the box for ventilation. The lower picture shows the box when completed.

MRS. W. A. R.,
New York.

Two Uses for Molasses

WHEN soaking salty ham, add a table-spoonful of molasses to the water. It improves the taste and makes it fry nice and brown.

A little molasses put in the milk used to dip bread for frying, will give it a delicious, brown crust.

M. L., Pennsylvania.

Flaxseed-Tea

THIS is the way I make flaxseed-tea: One ounce of flaxseed, one and one half ounces of white sugar, two tablespoonfuls of lemon-juice, two pints of boiling water. Let this stand in a covered pitcher several hours, then strain. This tea is excellent for sore throats and other inflammatory troubles.

E. H., Florida.

New England Marmalade

THREE pounds of pumpkin peeled and sliced thin, two and a half pounds of sugar. Put with pumpkin and let stand overnight. Cook very slowly in the same juice until tender, usually two or three hours. Add the juice of four oranges and three lemons, and cook until rather thick. When ready to take from fire add half the grated rind of oranges and lemons. This is a delicious jelly.

A. D. H., Vermont.

Worth Knowing

EQUAL parts of ammonia and spirits of turpentine are excellent for removing paint from clothing. Saturate the spot two or three times and then wash with a little soap and water.

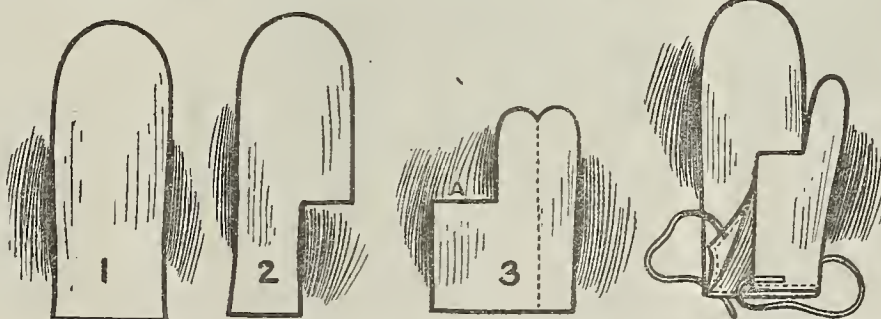
G. P., Ohio.

Home-Made Mittens

THE men wear out so many mittens in winter that I find it economy to make them myself. I buy two or three yards of heavy canton flannel and make them like the pattern here shown.

No. 1 is the back of the mitten, No. 2 is the palm and No. 3 the thumb and part of the palm. First cut the design out on paper. Sew No. 2 and No. 3 together on line "A" and then sew up the thumb in Figure 3. Now lay this on No. 1 and sew together, matching the round tops of Nos. 1 and 3; then turn. When making the left glove, cut the thumb on the opposite side. These mittens may be easily made to fit any hand. A black string or cord may be run around the wrist portion to fasten the mitten on.

MRS. C. S., Kansas.



Simple and Clever Pattern for Home-Made Mittens

The Tea-Kettle Knob

MY NEW tea-kettle lid has a knob of granite, and whenever the kettle got hot, the knob followed suit. But I soon overcame this trouble. I took a piece of twine and crocheted a piece about three inches long. This I tied around the knob of the lid. Consequently, my fingers are never burned.

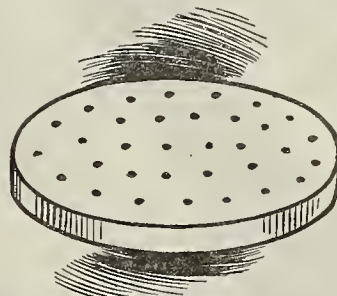
MRS. J. G. B., California.

False Bottom for Kettles

A SERVICEABLE home-made device for the kitchen is a false bottom for kettles.

Take a pail-cover or shallow tin of a suitable size to fit the kettle, and with a hammer and nail punch it full of holes, with the roughness on the inside, so that the water may have free play through it. When about to boil a piece of meat, insert this first, and there will be no danger of the meat sticking to the bottom or being tainted should it happen to boil dry.

L. E. C., Connecticut.



False Bottom for Kettles

Churning With an Egg-Beater

DO ANY readers of The Housewife's Club know how convenient it is to churn a small mess of butter with a Dover egg-beater? If I have on hand a small quantity of cream that would not warrant my using the churn, I put it in bowl and then place the bowl in a broad shallow pan or basin to keep it steady and prevent splashing. With the pan in my lap, I sit at ease in the kitchen rocker, while I turn the little handle of the egg-beater. This does not tire the arms and is much better than using a big spoon.

L. H., North Carolina.

Cocoanut-Cream Cookies

TAKE two eggs, one cupful of sugar, one cupful of thick sweet cream, one half cupful of shredded cocoanut, three cupfuls flour, one teaspoonful of soda, two teaspoonfuls of cream of tartar and one teaspoonful of salt. Beat the eggs until light, add the sugar gradually and continue beating. Add the other ingredients; sprinkle with cocoanut and roll to one fourth of an inch in thickness. The cocoanut may be omitted if desired and the result will be excellent cream cookies. Nice seed cakes may also be made from this recipe. These kind of cakes are not at all hard to make and are very economical.

MRS. H. A. R., Pennsylvania.

Apple-Snow Pudding

PARE and grate two apples, add the whites of two eggs and one cupful of granulated sugar. Beat thirty minutes. Take the yolks of the eggs, add one table-spoonful of flour, two table-spoonfuls of sugar, one cupful of sweet milk and boil until thick. Add a little vanilla after taking it from the fire. Put the pudding in a dish and pour the boiled mixture around.

MRS. J. O. S.,
Indiana.

The Housewife's Letter-Box

Questions Answered

For E. S., Illinois—Perhaps you boil the vinegar. It should be brought to scalding point before it is poured over the pickles. To keep the pickles crisp and hard, scald a tiny piece of alum with cucumber or gherkin pickles.

EDITOR.

WILD-GRAPE WINE, for Mrs. M. H., Connecticut—Twenty pounds of grapes, six quarts of boiling water, ten pounds of sugar. Mash the grapes in a stone jar. Pour over them the boiling water and let stand three days. Cover it to keep out dust. Strain the fruit and juice through a cheese-cloth bag, return juice to the jar, add the sugar and let stand until fermentation has ceased. Take off skum, strain juice and bottle tightly. Pour melted sealing-wax on corks and lay bottles on their sides in a cool place.

MRS. W. L. N., Nebraska.

For N. H., North Carolina—Here is a good recipe for pickled onions: Peel small white onions, cover with brine, allowing one and one half cupfuls of salt to two quarts of boiling water, and let stand two days,

and again drain. Make more brine and heat to boiling point; put in the onions and boil three minutes. Put in jars, interspersing with bits of mace, white peppercorns, cloves, bits of bay-leaf and slices of red pepper. Fill jars to overflowing with vinegar scalded with sugar, allowing one cupful of sugar to one gallon of vinegar. Cork while hot.

M. G., Idaho.

BANANA-FILLING, for M. E. C., Missouri—Slice five or six bananas into a bowl and mash well with a potato-masher. Then add three fourths of a cupful of sugar. Spread thickly between the layers and ice.

MRS. A. P. M., Pennsylvania.

Take a large cupful of thick sweet cream and beat until thick. Add sugar and flavoring, then spread on the layers. Slice the bananas crosswise and spread on filling.

MRS. B. R., California.

For Mrs. H. N. N., Texas—Sprinkle the cracks and corners of your pantry with pulverized camphor.

MRS. A. P. M., Pennsylvania.

Mrs. M. A. S., of Massachusetts, writes that ground cloves will drive away red ants.

We shall be very glad to have our readers answer any of the questions asked, also to hear from any one desiring information on household matters. There is no payment made for contributions to this column. Address the "Housewife's Letter-Box," Farm and Fireside, Springfield, Ohio.

Questions Asked

Can some of our readers tell me how to bake pears? **SUBSCRIBER, New York.**

Mrs. J. A. A., of Delaware, would like a recipe for making peanut-butter.

Wanted—A recipe for making good coconut-candy.

MRS. C. A. M., Pennsylvania.

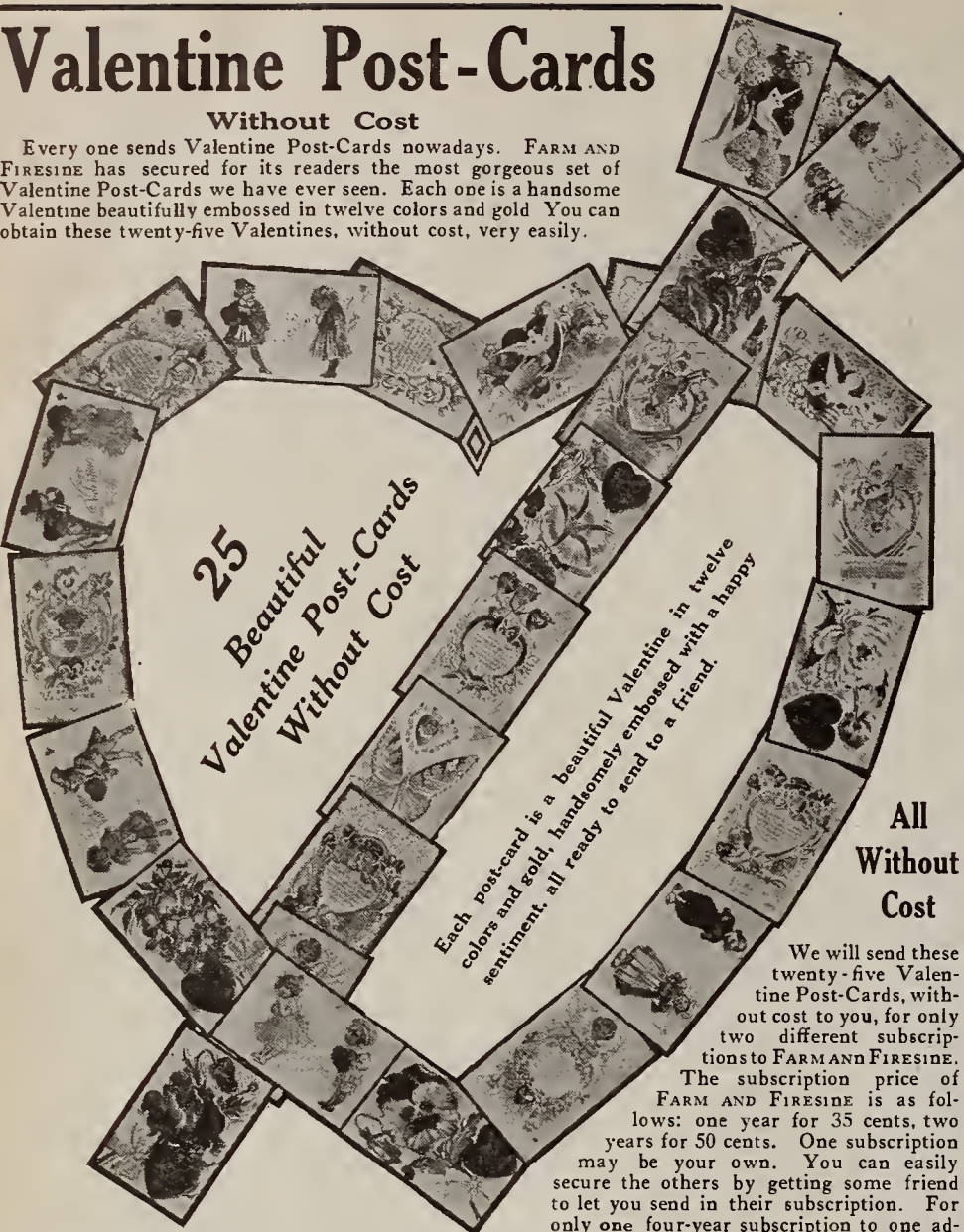
I am anxious to know how to make extra-refined white shellac. Can some reader help me? **MRS. S. I., Minnesota.**

Mrs. M. H., of Ohio, would appreciate a recipe for Graham bread made with yeast-foam.

Valentine Post-Cards

Without Cost

Every one sends Valentine Post-Cards nowadays. FARM AND FIRESIDE has secured for its readers the most gorgeous set of Valentine Post-Cards we have ever seen. Each one is a handsome Valentine beautifully embossed in twelve colors and gold. You can obtain these twenty-five Valentines, without cost, very easily.



On each card is, of course, some happy sentiment of the season. Every one will make friends wherever they go. There are twenty-five in all, every one different, depicting in beautiful colors chubby cupids, pink-cheeked children, gorgeous flowers—Everything about Valentine's Day. Each is worth the price of a handsome Valentine.

You can obtain an extra set of the Valentine Post-Cards for each extra subscription you send. That is, you can get two sets for three subscriptions, three sets for four subscriptions and so on.

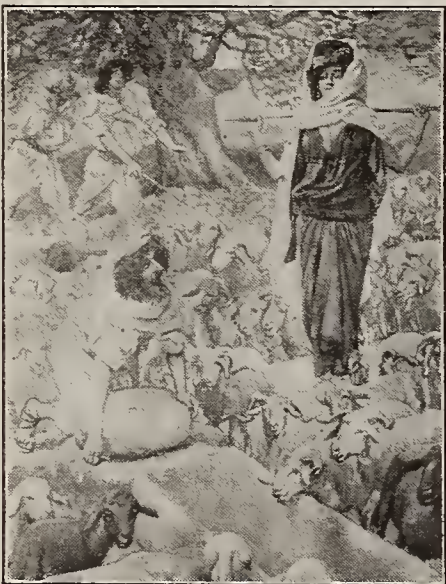
Every subscription sent before January 31st, will also receive Balfour Ker's famous painting, "Her Mother's Voice." Send the subscriptions to FARM AND FIRESIDE, Springfield, Ohio

Forty-Eight Famous Bible Paintings Without Cost

WE CAN now offer to FARM AND FIRESIDE readers the most celebrated religious paintings in the world in their original colors. We are able to give you, entirely without expense to you, the set of forty-eight world-famous Tissot Paintings of the best-known scenes and stories of the Bible. There are twenty-four pictures taken from the Old Testament and twenty-four from the New Testament. Each picture is a masterpiece.



Isaac Bearing the Wood for His Sacrifice



Jacob and Rachel at the Well

In Twelve Colors

THERE are forty-eight separate pictures, in full cabinet size, printed on expensive coated art paper. Every picture is in twelve colors. Each one is a perfect reproduction of the original painting, showing all the gorgeous colorings. Tissot's paintings make the scenes from the Old and New Testaments real to us. We feel that we know the great characters of the Bible, such as Jesus, Jacob, Moses and Ruth. Every painting depicts some familiar Bible scene or story. They are tremendously interesting to every one. Bishop John H. Vincent says, "Simply to look over Tissot's Pictures is a big step in one's education." Rev. Newell Dwight Hillis writes, "A storehouse of beauty and a never failing delight." You can get them without one cent of cost. Over a million people paid Fifty Cents each simply to look at the Tissot Paintings when they were exhibited in the big cities of the world. You can now have these wonderful pictures right in your own home without paying a cent.

Our Great Offers

No. 1—Without Cost Send us two subscriptions to FARM AND FIRESIDE and we will send you the complete set of forty-eight beautiful Tissot Paintings in twelve colors, postage prepaid. One subscription may be your own. To get the second subscription, get some friend to hand his subscription to you. To obtain the paintings without cost you must send two different subscriptions. Balfour Ker's great painting, "Her Mother's Voice," will be given with each subscription if sent before January 31st.

Offer No. 2 We will send this complete set of forty-eight beautiful Tissot Paintings to you if you add 20 cents to the price of your subscription. **Subscription Price of Farm and Fireside**—\$1.00 for a four-year subscription to one address; 50 cents for a two-year subscription to one address; 35 cents for one year, until January 31st, only. Send money the way most convenient. A postal order is safest. Don't miss this last chance to get this set of Tissot's Pictures. Send your order to-day to

FARM AND FIRESIDE, Springfield, Ohio

With The Editor

I HAVE just been looking over a batch of letters from our readers. They breathe the true Christmas spirit—that is they are full of appreciation and goodwill. I was just thinking of the way in which the sometimes stern and rocky soil of our natures is mellowed and opened up to kindlier growths in these holidays, when I had it pointed out to me that these letters all were dated weeks before Christmas!

So I was compelled to believe that this spirit of appreciation belongs to FARM AND FIRESIDE readers the year through. I know how far short the paper falls of what we hope to make it, and it is mighty pleasant to look over these letters showing that you know what we are up to, and are giving us credit for what we are going to do as well as what we have done. Guy Nesmeier, of Dakota, Illinois, says, "I notice you are going to make some improvements in your paper. You cannot make many more!"

Well, it isn't as easy to get features better than the old FARM AND FIRESIDE as some might think, but we are going to do it—watch us. Mr. Hinton, of Bunkersville, West Virginia, says that if we enlarge it much more he is afraid it won't be as good. "It was good enough for me," says he. "I could read all of it then, and now I am afraid I'll not be able to do it."

Thanks, gentlemen, both! But, you see, Mr. Hinton, tastes differ, and we want to please every member of every family. Capitola Sexton, who has gone into town and takes FARM AND FIRESIDE along, reads every page of it, "and especially the stories." This pleases me right down to the ground—to know that in town where the news-stands are covered with story magazines, ours find readers in competition with them. But to go on with the thought that in the kitchen or parlor of Mr. Hinton or Mr. Nesmeier—or any of you—maybe some soul with needs quite different from those of our well-satisfied correspondents.

And here's the proof of it! Down in Birmingham, Alabama, is a girl or a woman named—no, it wouldn't be fair to tell the name—but she says this to us: "I am dearly in love with the beautiful post-cards, and more in love with the interesting love story. I hope there will be a good love story in every number, and as long as there is, my subscription will last."

There you are, now! This matter of sentiment, of love, of courtship and marriage is, after all, the great thing in life for millions. Oh, pshaw! Let's confess it, even though we are middle-aged and stolid and rheumatic, maybe, and troubled with cracked hands and a tendency to tell the same story over twice the same evening—it's the big thing in life for all of us. The little girl, as we shall call her—though the handwriting doesn't look like this new-fangled up-and-down writing they teach now, and seems to date back at least forty years—is asking for the thing that more people need than anything else in the world except air, and that is love. And it's odd, too, that the good, homely woman who learned to write forty years ago—and this doesn't mean the little girl in Alabama—needs it as much as when slim and fair, she trembled at the breath of its declaration, and smoothed down her gingham apron with quivering hands when you—you rough old Newfoundland!—knocked at her door on that Sunday evening forty years or so ago.

Oh, well—you see why we have to expand FARM AND FIRESIDE, don't you? There are so many different sorts of people—even under the same skin. Let's go on with the letter-box. Mr. Dimmock, of Schenectady is another city dweller whose subscription has followed him from the farm; but he pleases us by telling how some of the boys in the locomotive works there have been inspired by FARM AND FIRESIDE to buy and move upon farms. "Now," says Mr. Dimmock, "they have a good farm—all through your paper. There is none I like so well." An old friend at Middletown, Connecticut, who doesn't want his name printed asserts that FARM AND FIRESIDE surpasses any publication for the price he has seen "in seventy-five years." Mr. Kirk, of Bristol, Indiana, has hard work to get us new subscribers, as every one in his neighborhood takes the paper. We are not as sorry about this as you might think we'd be.

Even to mention the names of these dearly-prized correspondents would take up too much space. To one and all we render thanks for helpful words, and to one and all we confide the secret that among our New Year's resolutions is that of making good every demand, every over-high bit of praise, every expectation of our readers.

We need the help of the readers, too. Mr. J. R. Black, of Sumter, South Carolina, in renewing his subscription speaks a word or so which reveals the mutual interests of readers, advertisers and publishers:

"Yours has always been a great paper, but it is better than ever now. I have watched it improve from issue to issue from year to year. Another step in the line of improvement is the fact that you guarantee your advertisers, something very few papers do. A good many of them want nothing but the money for the space and their subscribers stand the losses. I am glad to say that you are not that kind."

Reader—advertiser—editor. Now there abide these three, and the greatest of the three, in some respects is the advertiser.

We like to have you write us these pleasant things—it helps us make a greater paper; but it would help even more in making for our success if you would tell the advertisers about us when you have business with them. Do you know that our advertising columns are as interesting as any of the rest of the paper? That they all bear on your work? That you can't do better as a farmer than to send for the literature they offer? And that when you do so, you owe it to us to say we sent you there?

"I saw your ad in FARM AND FIRESIDE!" This is the golden text of the real friend of his farm paper. These advertisers are good, reliable men, every one of them, or, as Mr. Black suggests, they wouldn't be in our columns.

Get into relations with them! Mr. Advertiser, allow us to make you acquainted with Mr. Subscriber—and don't forget who introduced you.

I had a feast of good things coming to tell you about, but I have rambled so far afield that it must be put off. I wanted to thank you all for your expressions of good-will and to wish you all a happy winter, a seasonable and propitious spring, a fruitful summer and an opulent autumn—in other words, a Happy New Year.

HERBERT QUICK.

The Farmers' Lobby

[CONTINUED FROM PAGE 19]

international parcels post conventions among the countries of the International Postal Union, and gives to international business a rate lower than to domestic business. That is arranged by treaty. So important is the parcels post, in the opinion of those enlightened nations which enjoy its advantages, that they insist upon our giving their people the benefits of it, even while we deny those benefits to our own citizens. So we present the remarkable spectacle of being the only first-class, progressive country having no parcels post of its own, but compelled, in order to maintain its postal agreements with the rest of the world, to give those privileges to the citizens of other countries.

Now, a parcels post in this country would immensely reduce the cost of transporting parcels, and would break the immensely profitable monopoly the express companies enjoy. The Hitchcock "reform" would vastly increase express profits. The people would pay the bills.

A parcels post would reduce express profits, give the people the benefit, and would wipe out the postal deficit and immediately make the post-office department highly profitable.

Even the proposed rural parcels post—a scheme of giving the privilege of parcels transmission within the limits of single rural routes—would wipe out the deficit and place a profit to the credit of the post-office department, besides being of incalculable benefit to the rural population.

But the "reformers" of our postal department are in favor of neither of these. The plans are laid to carry out this project of profiting the express companies at the expense of the people.

There is just one way to stop it. That is to—

Write—at once—to-day—to your congressman and senators protesting against any change in second-class mail rates, and demanding, instead, the rural parcels post.

Miss Selina Lue

[CONTINUED FROM PAGE 24]

"Oh, Miss Selina Lue, I didn't mean you to guess—that is to say, I have no right to—" Mr. Alan broke down and commenced all over again with shining eyes. "It began two months ago at my first sight of her here in the grocery door. She is so beautiful and—I—I do care—I—I! How glad I am that you know, dear Miss Selina Lue; now I can talk about it to you. I know I ought not to—and I—"

"Young man, I've got a heap more faith in the love that is so much it spills over than in the kind that don't quite fill out the measure."

"Oh, do you really think—could it be possible that I have just a chance with her? I—I—I—"

"Wait a minute," said Miss Selina Lue, and moved by a desire to settle the matter then and there she hurried into the store toward her room door, but she was too late, for the bird had flown from behind the molasses-barrel. Miss Cynthia was stealing through the garden, and in her ears there sounded a soft-voiced echo: "She is so beautiful—I do care—"

"My, that pin must've been a crooked one that she couldn't get to without undressing," said Miss Selina Lue to herself. "I do hope she will come back right away." And she went out to the steps a bit crestfallen, still actuated by motives of delicacy in not mentioning Miss Cynthia's precipitous flight.

"Did you ever see anything so lovely as she is, Miss Selina Lue?" And the rhapsody began where it had been interrupted.

"Yes, and her heart and soul are jest as pretty as she is. I was a-thinking the other day that they ain't many girls as would git into folks' lives as she have done right here on the bluff. She is friendly to everybody and they husbands. Miss Cynthia have stove off trouble fer Mr. Kinney more times than he knows."

"I don't know what I am to do. I never can seem to see her anywhere, and she hasn't asked me to call on her." Mr. Alan's lugubrious tones were symptomatic of his condition.

"Well, anyway, there's the party tomorrow afternoon and she'll be here sure. I want to git your advice about how to do things stylish. Would you have the pie on plates, and knives and forks to eat it with? Or would it do to hand it around in wedges to be et like cake?"

"I believe the plates would be safer," answered Mr. Alan in a judicial tone. "She might get some on her dress."

"That depends on whether they was made cross-barred, open-face or kivered. Cross-barred is the prettiest, but they could all lean over and bite kivered without making no mess," said Miss Selina Lue, who was seeing the question from all viewpoints before deciding.

"Suppose you have the plates for the grown people and let the youngsters take their luck," compromised Mr. Alan, not liking the idea of trusting the "kiveredcs" entirely.

"That's just what I'll do," answered Miss Selina Lue. "I am going to clear off the counters so they can set up to them and be comfortable, and I am going to put a bunch of flowers in between each pile of pies. Won't they all have a good time?" Something in Miss Selina Lue's beaming hospitality smothered any misgivings that Mr. Alan might have had about the arrangements, and his glow of anticipation matched her own.

"Well," she remarked briskly, "I must be turning around if I am to get all that ready. Can't I help you fix up none? Don't you want any pants pressed? I could borrow the heavy iron Mis' Simmons presses Mr. Simmons' with and do it in no time."

Miss Selina Lue's sweet solicitude went to Mr. Alan's heart and he took her hand as he said:

"If my mother had been with me, Miss Selina Lue, she would have let me tell her—about—it all—and she would have—asked about the trousers. I wonder if it is because you are not anybody's mother that you are everybody's?"

"Mr. Alan, you are the first person that ain't put that to me pitying-like about not having no children, and here you are giving me the whole world to mother. Well, my heart ain't crowded yet; they is room fer 'em all, big, little and grown-ups too. Seems like sometimes grown-ups show a mighty hankering fer a little

mothering, and I ain't the one to hold it back from 'em. Lands alive, if there ain't Mis' Tyne and all the family come back! You pick up Pattie and bring her out here, fer I know her ma is jest dead to see her, and I will run and help Sammie and Ella Virginia carry that valise."

As Mr. Alan approached the group that seethed around and against Miss Selina Lue, the mother of Pattie segregated herself from the mass and without warning precipitated herself on "and so necessarily on that young lady's new friend."

"Oh, please excuse me, sir," she panted, gaining her equilibrium and her off-spring at the same time. "I was jest that excited! Seems like I could eat her up. Miss Selina Lue, you can't never know how good it is to git back to one you've left," which seemingly, only seemingly, ungracious remark had the edge taken off by Pattie's emphatic squirm and whimper toward Miss Selina Lue. The quality of Miss Selina Lue's mercy she knew, and that of her mother she had forgotten.

"Give her back to me, Mis' Tyne, and I will put her in her soap-box while you all git unpacked. You come jest in time fer the party, and you better git about fixing fer it. Thank you, Mr. Alan—the valise are a heavy load fer the children."

As she stood on the grocery steps and watched Mr. Alan carrying the Tyne valise on down to the Tyne front door with perfect courtesy, she spoke earnestly to Blossom, who sat in a split basket by the door. "Blossom," she said in tones of quiet joy, "it looks like the two nicest people in the world are going to git married to each other, and ain't it fine that they dispositions fit into one another like the edges of a piece of paper tore in two? Sometimes when I see wives all wore out with work and crossness, and husbands fed bad and no buttons, and sick children and too much beer at the saloons, let alone a hard winter-coming, I git too much pleased with my condition, and I need jest sich a thing as this to remind me that the Lord do join some folks which let not man put asunder. Amen!"

[TO BE CONTINUED]

Slumber Song

BY BEATRICE GRISWOLD

SLEEP, my babe, for the fairy moon
Is watching near, and her slender bars
Of silver beams
Shall guide thy dreams
To the path of the fairy stars.

Rock-a-bye, rock-a-bye, baby,
Sleep while the star-light gleams
Close in thy tiny cradle that swings
By a silver chain of dreams.

A fairy cloud is thy cradle
Swayed on a twinkling sea
Drifting slow
In the silver glow
Twixt the fairy moon and thee.

Rock-a-bye, rock-a-bye, baby,
Sleep while the star-light gleams
Close in thy tiny cradle that swings
By a silver chain of dreams.

Foiled Again

BY MARY F. K. HUTCHINSON

A NEIGHBOR, Jones, who lives next door,
Has bought a motor carriage,
For which he's built a sort of barn
That Bobby calls a gar-rige.

With shingles stained, it looks quite nice,
Although not very large,
And Jimmie says that "Mr. Jones
Has got a fine gur-range."

Is gar-riage right? Or is gur-range?
In truth, I could not say;
Nor would I show my ignorance—
I knew a better way!

I waited till my college niece
(Who thinks she knows it all)
Came down, last week, one afternoon,
For her vacation call.

I asked her where her uncle was,
And this is what she said:
"He's out there, aunty, gossiping
In Jones's bubble shed!"

When Were You Born?

Birthstone and Flower Post-Cards



Each of these twelve beautiful post-cards (one for every month) depicts in many colors the special jewel and the flower to be worn by every person born in that month. Each month's post-card also shows the special meaning and sentiment that is given to the jewel and the flower of that month. For instance—the January post-card depicts in gorgeous colors a beautiful Garnet set in a brooch, which signifies "Constancy." The January post-card also depicts a cluster of glorious Purple and Gold Pansies, which means "Thoughts of You." There are twelve post-cards in all, one for each month.

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How to Get Them

We will send you these twelve beautiful post-cards without cost if you will send us 10 cents (silver or stamps) for three months' trial subscription to FARM AND FIRESIDE. Our only requirement is that the subscription must be for some one who is not now a regular subscriber. Send FARM AND FIRESIDE to a friend for three months.

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Springfield, Ohio

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Farm and Fireside, one whole year
The 1910 Baby Calendar } For Only **50c**

The Housewife comes every month. It has splendid stories, a fine fashion department, everything that a woman wants to know about the home. It is a favorite magazine with thousands of women. You will be delighted with it and enjoy it every month.

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The 1910 Baby Calendar, packed in a tube } **ONLY \$1.00 FOR ALL**

Farm and Fireside is the National Farm Paper. It is progressive—up-to-date. It is far in advance of the rest of the farm papers in live interest and actual value to the farmer and his family. The biggest men in American agriculture contribute valuable articles on live stock, grain, poultry, fruit, etc. The fashion department, the household articles and the entertaining stories, all are of tremendous value and interest to the women folks. As the leading farm and family paper it should be in every farm home.

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The 1910 Baby Calendar The finest Art Calendar ever offered by any farm paper.

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One hundred and eighty numbers of the two greatest American papers for only \$1.00. These two alone will supply a family with the best reading and news for a whole year. No one can afford to miss this great offer. The subscription can be new or renewal. They can go to one or to different addresses. Send us \$1.00 to-day and you will at once be entered to receive both of these great papers for a whole year and the beautiful 1910 Baby Calendar. Address

FARM AND FIRESIDE, Springfield, Ohio



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Yes, free. I don't ask a cent of your money—I don't want you to keep the phonograph—I just want to give it to you on a free loan—then you may return it at my own expense.

Read the Offer:

I will ship you free this grand No. 10 outfit, Fireside Model, with one dozen Gold Moulded and Amberol records. You do not have to pay me a cent C. O. D. or sign any leases or mortgages. I want you to get this outfit on this free loan—the masterpiece of Mr. Edison's skill—in your home. I want you to see and hear Mr. Edison's final and greatest improvement in phonographs. I want to convince you of its wonderful superiority. Give a free concert; give a free minstrel show, music, dances, the old-fashioned hymns, grand opera, comic opera—all this I want you to hear free of charge—all in your own home—on this free loan offer.

MY REASON—My reason for this free loan offer, this extra liberal offer on the finest talking machine ever made—see below.

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The Phonograph is the result of years of experiment; it is Mr. Edison's pet and hobby. He realizes fully its value as an entertainer and educator; for the phonograph brings the pleasure of the city right to the village and the farm home. Now, the new Fireside Edison Phonograph of our outfit No. 10, 1910 Model, is the latest and greatest improved talking machine made by this great inventor. Everybody should hear it; everybody must hear it. If you have only heard other talking machines before, you cannot imagine what beautiful music you can get from the outfit No. 10. This new machine is just out and has never been heard around the country. We want to convince you; we want to prove to you that this outfit is far, far superior to anything ever heard before. Don't miss this wonderfully liberal offer.

My Reason I don't want you to buy it—I don't ask you to buy anything. But I do feel that if I can send you this great phonograph and convince you of its merits, of its superiority, you will be glad to invite your neighbors and friends to your house to let them hear the free concert. Then, perhaps, one or more of your friends will be glad to buy one of these great outfits No. 10. You can tell your friends that they can get an Edison Phonograph outfit complete with records for only \$2.00 a month—\$2.00 a month—the easiest possible payment and, at the same time, a rock-bottom price. Perhaps you, yourself, would want a Phonograph, and if you ever intend to get a phonograph, now is the chance to get the brand new and most wonderful phonograph ever made, and on a most wonderfully liberal offer. But if neither you nor your friends want the machine, that is O. K.; I simply want you to have it on a free loan, and perhaps somebody who heard the machine will buy one later. I am glad to send it on a free loan offer anyway. I will take it as a favor if you will send me your name and address so I can send you the catalog—then you can decide whether you want the free loan. There are no strings on this offer, absolutely none. It is a free loan that is all. I ask not for one cent of your money, I only say if any of your people want to buy a phonograph, they may get one for \$2.00 a month, if they want it.

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FARM AND FIRESIDE

THE NATIONAL FARM PAPER



ESTABLISHED
1877

JANUARY 25
1910





See Important Notice to Subscribers on Page 25

Maule's Seeds

Once Grown Always Grown

From a small advertisement in the Farm and Fireside last season 5,314 readers of this paper sent to me for a catalogue, of which number more than 3,000 are now on my order books as regular customers. This advertising paid me so well that this year I am using enlarged space. Probably if no advertisement appeared at all, more than 30,000 subscribers of this paper would plant Maule's Seeds the coming year; if possible I want to double that number.

 I will be glad to send my Seed Book for 1910 to every reader of Farm and Fireside who will send me their address on a postal card. 

Over 300,000 copies have already been mailed, at a cost of more than \$60,000, to regular customers of last season. Every one writes me it is the most complete Seed Catalogue they have ever seen. It contains 192 large pages, full to overflowing of *everything good, not only in Seeds, but also in Plants, Small Fruits, etc., etc.* In fact, it is a complete encyclopedia of everything the farmer and gardener needs. Not a reader of the Farm and Fireside who proposes to make a garden the coming year, or even plant a window box, should think of ordering before receiving this book. Maule's Seeds have today a reputation surpassed by none, equaled by few, and as you can always get

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James Wilson—Secretary of Agriculture

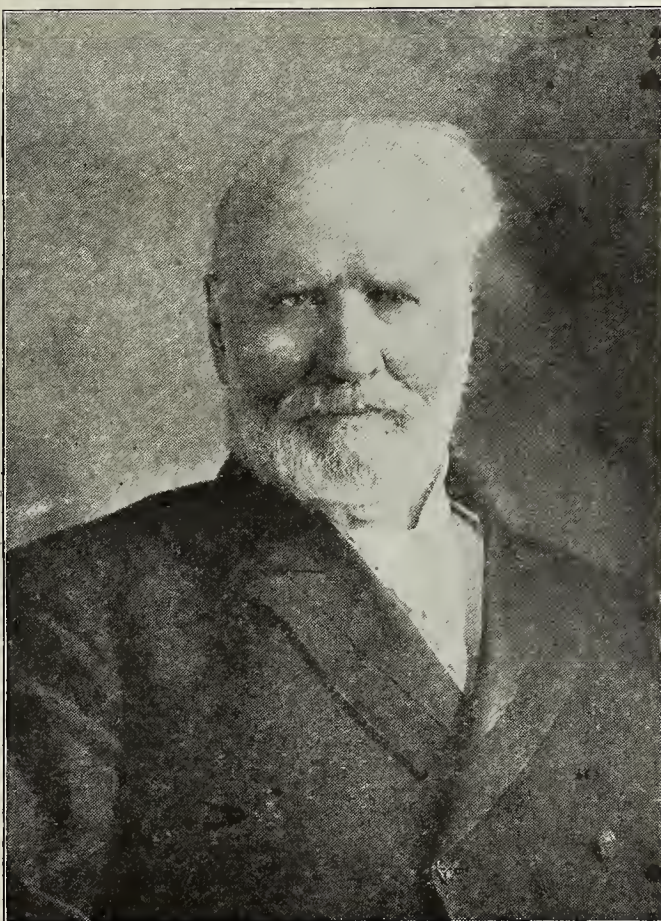
By John Snure

Secretary James Wilson has been a benefactor of agriculture in a different sense from those other men whose work we have presented. His services have not been personal; he has been, rather, an organizer and a leader. His army of experts have done the work that has given the department its incalculable value; but they would be the first to credit the secretary with the organization that made their work possible. Mr. Wilson has faced much just criticism for his stand in the benzoate controversy; he has been held responsible for over-optimistic crop prophecies. Without passing judgment on these matters of controversy, we present this study of his twelve years' service, the worth of which is beyond controversy.—EDITOR.

NO OTHER man in the history of this republic has had the opportunities to do great things for the farmers of America that have fallen to James Wilson, of Iowa, Secretary of the United States Department of Agriculture.

This is a sweeping statement, but it will bear analysis. In a few months more, Mr. Wilson will have been in the cabinet thirteen years without a break. He has already broken all records for length of service as a cabinet officer. He began his career as Secretary of Agriculture March 5, 1897. It was about this time that the country recovered from the effects of the hard times which were first felt in 1893 and depressed industry in various lines for several subsequent years. From 1897 until now the tide of prosperity has rolled marvelously high, save for the brief lapse which began in the fall of 1907. It has been a period of wonderful expansion in trade, commerce and all forms of industry. Agriculture has reaped its full share of the rewards of this expansion, and farming in the United States has grown to such proportions that the annual value of the farm products staggers the imagination. King Croesus in his wildest dreams never conceived of an empire where the annual output of the farms amounted to eight billion dollars and where the value of the farm-lands, buildings, improvements, live stock, implements and machinery was over twenty-eight billion dollars. That these values have been growing by leaps and bounds in Secretary Wilson's dozen years of cabinet service is clear from the slightest glance at agricultural statistics. In two decades the capital of the farmers of the United States has increased about eighty per cent. The years since 1897 have been years of momentous changes to agriculture. Emerging from the era of low prices that prevailed for a time preceding that year, the farmer entered into improved financial conditions and found himself in a position to give consideration to better methods of agriculture and to such assistance as might be given him in taking up with those methods by the Department of Agriculture, the experiment stations, the agricultural colleges and other agencies. It has been the remarkable good fortune of Secretary Wilson to stand at the head of the Department of Agriculture through America's fattest agricultural years and through the years when the farmers have been in the best position to turn their attention toward such better ways of farming as come with an understanding of agricultural science.

It is proposed here to tell in brief fashion something of what Secretary Wilson has done and how he has lived up to his opportunities. At the outset, it may be said that he has not escaped criticism. He has encountered storms of it. He has been accused of lack of executive ability, of an undue predilection for politics, of fathering unreliable crop statistics, of extravagance and a long list of official sins, both of omission



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Secretary Wilson, To-Day

and commission. A weaker man and one whose services to the country were less meritorious would long ago have been sent into retirement.

Secretary Wilson is not a college man. He was born in Ayrshire, Scotland, 1835, in a day when the college of agriculture was unknown. He learned farming on the acres of his hard-headed Scotch father and he learned it thoroughly. "My father was one of the best farmers I have ever known," said the secretary one day in speaking of how he had learned right methods of tilling the soil. "He came of a long line of farmers, men who knew their business and took pride in it."

At the age of seventeen James Wilson came to this country with his parents and settled on a farm in Connecticut. Three years later he went to Iowa, to Tama County, and it was not long until he had settled down to farming on his own account. He still has his residence in Tama County, where he early became known as "Tama Jim," a sobriquet frequently given him which is familiar the country over.

In the forty years following his settlement in Iowa, "Tama Jim" Wilson became one of the leading figures of his state. He also became well known nationally. He served six years in the Iowa legislature, part of the time as speaker of the house. He was elected to Congress in 1872 and served in the Forty-Third, Forty-Fourth and Forty-Eighth Congresses. His experience in the House of Representatives gave him an intimate knowledge of the ways of doing things at the Capitol

and of Washington official life generally. This experience has been invaluable. He was for a time a member of the railway commission of Iowa. For the six years previous to becoming Secretary of Agriculture he was director of the agricultural experiment station and professor of agriculture at the Iowa Agricultural College at Ames.

When in Congress, Mr. Wilson introduced in the House and urged strongly a bill to create a Department of Agriculture. It passed the House, but was not made a law. It was later that the Department of Agriculture was provided for, but the work done by Mr. Wilson in behalf of such a department was of distinct value in directing the attention of Congress to the subject. This was one of his first services to the farmers of the country. His work at the experiment station at Ames and as professor of agriculture in the college there constituted another important service to the cause of agriculture. While on his farm he had taken up various studies along agricultural lines, both theoretical and practical. He ran a paper and devoted much attention to writing on farm topics. These attracted wide notice in Iowa and pointed to him as a man qualified to head the experiment station and to be professor of agriculture at Ames. In the six years he was there "Tama Jim" succeeded in building up the state agricultural college greatly. He stirred up an enthusiasm theretofore unknown in the institution and got it thoroughly on its feet. This college is now one of the foremost of its kind in the country. It has been a powerful influence for good farming in Iowa and throughout the Middle West. Some of the ablest agricultural teachers and experts in the country were at one time students at Ames under Wilson.

When President McKinley selected his cabinet early in 1897, he got along without great difficulty until he came to filling the post of Secretary of Agriculture. This gave him many sleepless nights. He wanted a strong department. He knew this meant expenditure of money. One day a Texas delegation came to him and said they had a man for the place.

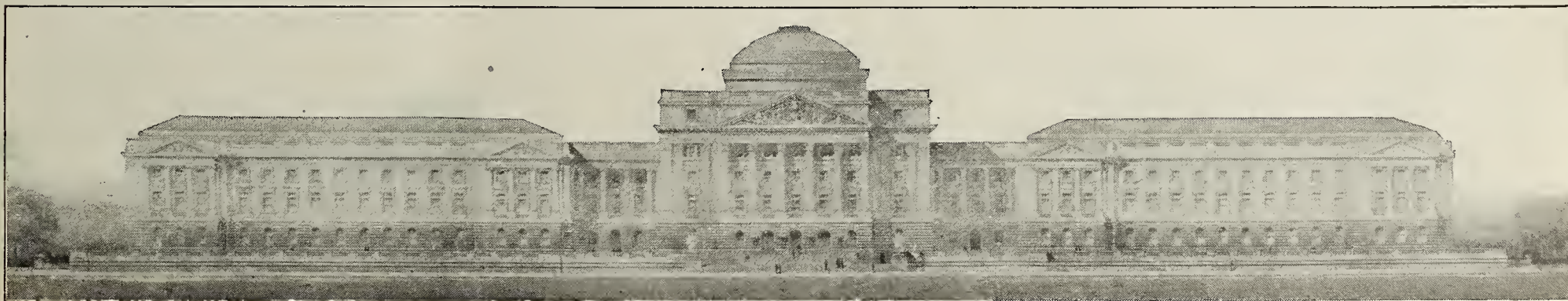
"He must be a farmer, must own his own farm and must have taught agriculture," said Mr. McKinley.

The Texans said their man could meet all these requirements.

"I also want a man who has been in Congress and knows how Congress does things," said Mr. McKinley.

"Mr. President, there ain't any such man as the one you want in the whole country," said the spokesman of the delegation.

Mr. McKinley thought there was and presently had his attention called to "Tama Jim" Wilson out in Iowa. The venerable Senator Allison said Wilson was just the man for the job. McKinley knew Wilson and thought so, too. So he was appointed and became head of the Department of Agriculture as the successor to J. Sterling Morton. Mr. Morton was a man of great ability, but of rather narrow views as to what should be the scope of the Department of Agriculture. He had conducted the department on lines entirely too constricted to suit Secretary Wilson, who believed its field should be vastly expanded. In his final report, Mr. Morton referred with pride to the amount of money saved in the conduct of the department. Secretary Wilson saw that, on the contrary, if the department were to realize its possibilities it was going to be necessary for Congress to provide more money. He had his mind well made up when he left Iowa and went to Washington what the sphere of the Department of Agriculture should be. He felt the department



The Future Home of the United States Department of Agriculture—Construction Begun Under Secretary Wilson

should do everything possible to give the farmer a better knowledge of the soil and crops and to teach him to grow better crops, and that the United States should grow everything it could grow at home instead of buying it abroad. He has not departed from this theory.

Probably the greatest single service Secretary Wilson has done the farmer is that he has brought Congress to realize the importance of the Department of Agriculture. He took the position that Uncle Sam could well afford to expend a number of millions of dollars on the development of an industry whose yearly products were measured by billions, and that every dollar the Treasury paid out for intelligent development of agriculture in the United States would be repaid many times. And he made Congress see the point. It was here that the good judgment of William McKinley was vindicated. Having served in Congress and knowing many of its members personally, Mr. Wilson was able to command more consideration from that body than a man unused to the ways of Congress. It has seldom happened in the twelve years and more he has been in the cabinet that Secretary Wilson has gone before the committees of House and Senate and said his department needed money but what it has been granted.

System Plus Enthusiasm

When Secretary Wilson entered the Department of Agriculture there were about twenty-four hundred people employed by it. The appropriation for 1897 was \$2,448,532. The number of people in the regular service of the Department of Agriculture has increased to about 11,000 and the government pays out, all told, about \$18,000,000 a year for the support of the department.

The bare figures, however, tell but a small part of the story of expansion. The system of bureau organization has greatly facilitated the work, which has grown rapidly in volume and in efficiency.

It would take volumes to tell adequately of the work of the department in the years that have passed since 1897. It would be idle, of course, to say Secretary Wilson deserves credit for all this work. He would be the last man to lay claim to it. But he has for years been the man in command of the strongest army of agricultural experts in the world. This army has attacked a long array of farm problems and has overcome many of them. Secretary Wilson has given general direction to the work which has been done and has backed up the experts of his force who have set out to advance the cause of agricultural science in one way or another.

When a leading official of the department was asked what had been the chief contribution of Secretary Wilson to the department, he replied:

"Optimism."

He explained that the secretary had always been a "bull," that his influence has never been bearish, that he had understood the great need of a strong Department of Agriculture and had realized the vast field of endeavor that lay before it. He had never frowned down his subordinates who wanted to reach out in new directions.

Up in New England a careless college professor, who had imported a number of gipsy-moths from Europe, one day allowed them to escape through an open window. The result was the rapid multiplication of the moth and damage to New England forests and orchards. Dr. L. O. Howard, chief of the bureau of entomology, saw a way to reach the pest if a parasite could be found which would prey upon it. Secretary Wilson sent him to Europe to investigate and go into the matter thoroughly. The result is that parasites of the gipsy-moth have been introduced into New England and there is promise that the ravages of that pest will be reduced and the rest of the country relieved from danger.

What happened in this case has happened in hundreds of others. The men of the Department of Agriculture who have believed they could do things have not been held back and hampered. Secretary Wilson has given them opportunity to test their ideas. Just as a parasite has been discovered to attack the gipsy-moth and introduced into this country, the natural enemy of the San Jose scale has been found in China and introduced, though the economical use of sprays has made the attempted establishment of the natural enemy of comparatively slight importance. Parasites that prey on the brown-tail moth have been introduced into New England with success, and successful experiments for handling the parasites of the Hessian fly promise to be of much value to the wheat-farmer. Many other instances of like nature might be mentioned. The United States has been a leader among nations in its work for the elimination of injurious insects and it has largely been due, not to the work of Secretary Wilson, but to the manner in which he has squarely supported the entomological experts who devoted their energies to insect problems.

"Secretary Wilson himself has not made the many important discoveries that have been made in his time by the department," said an authority on agricultural matters the other day. "But he has mapped out the general directions of the work to be done and he has held the boys' noses down to the grindstone."

When Secretary Wilson came into the Department of Agriculture he found that one of its greatest needs was a larger corps of experts, men who knew the ins and outs of animal industry, plant industry, entomology, soils, and the like. Not only this, but he found that there was no sufficient supply of these experts to be drawn upon. He set out to develop them. He has pursued this policy from the first day he stepped into the department and from the moment when, having just taken the oath of office, he inquired whether there was any one in the service who knew all about sugar-beet seed. He found it impossible to get the man he wanted and had to cast around outside the department. He has created a vast force of three thousand specialists that is making investigations constantly into problems that relate to the farm. Among so many experts are men of world-wide reputation, and it has come to be that the Department of Agriculture is finding it difficult to keep in the government service some of its most competent men.

Big colleges and universities and large private interests want them and are willing to pay more than the government. Now, however, the force of available trained specialists in the department is so large that the retirement of one for any reason is not likely to cause serious embarrassment. Twelve years ago, when

saw the importance to future generations of bringing into cultivation and laying tribute upon the dry lands west of the one hundredth meridian.

Under his direction, the world has been scoured to find grains and grasses and legumes grown in regions where the conditions with respect to rainfall and temperature were like those in the dry lands of the West. Some eight years ago dry-land wheats were found which are now giving this country about sixty million bushels per year. A number of varieties have been developed. It is now often said that in ten years the United States will have to import wheat. And if no effort were being made to produce more wheat in the United States from more acres and more bushels to the acre this would have to be accepted as probably true. No great noise has been made about the movement which Secretary Wilson is continually urging forward to convert vast dry-land areas in the West which are not subject to reclamation through irrigation projects. But the facts are there are twenty-one stations established under the bureau of plant industry in the dry states, with scientists located at all of them, studying the dry-land problems and investigating the question of what grains, legumes and grasses with the best results. A good deal of promise is coming from these investigations.

It was Secretary Wilson who sent Prof. N. E. Hansen of South Dakota into Siberia and Turkestan, as an agricultural explorer for the Department of Agriculture. He made three trips in all to Siberia and gave especial attention to the wild alfalfas and clovers of that country



The Present Building of the United States Department of Agriculture

experts were scarce, it would have been troublesome.

At the end of the régime of Mr. Morton and the beginning of the Wilson régime the exports of dairy products from the United States were at a low ebb. Secretary Wilson took prompt steps to increase exportation. He found we were getting much lower prices for our dairy products in Great Britain than other countries and that much of the exportation was of inferior quality. Congress gave the department control over renovated butter, and through the exercise of this control and in various ways the export trade in dairy products was materially increased.

Out in Iowa "Tama Jim" through long years had been familiar with the text, "Test Your Seed-Corn." He believed in it. He understood as a practical farmer the great importance of having good seed. He found about as soon as he took his cabinet chair that the seeds which were being sent out to the farmers of the country were of low grade. They were bought at the lowest price by wholesale. They were rapidly getting a bad reputation and were hurting the reputation of the Department of Agriculture. Steps were taken to have seeds grown under the supervision of scientists of the department so that tests of vitality could be made and those not up to standard rejected. Now, the department grows its own seeds and it is the policy to send out nothing but seeds of the highest germinating power.

The Search for Drought-Proof Plants

The introduction of seeds and plants from other countries has been carried by Secretary Wilson to great lengths. It bears close relation to one of the greatest agricultural problems of the country. Some years ago Sir William Crookes predicted that the time would come when the food supply would be inadequate. He advanced the doctrine that population increased in geometrical progression and production in mathematical progression. Something of this view has been enforced on the United States. Secretary Wilson

with a view to their introduction into the dry lands of the United States. The story of the adventures of Professor Hansen and the hardships he underwent in the frozen regions of Asiatic Russia, sometimes a thousand miles from a railroad, amid peoples barely civilized and wild nomadic tribes, reads like a romance. He has been highly successful and there is reason to believe that he has found varieties of alfalfa and clover and shipped seed thereof to this country which will one day result in crops of great value, raised on lands now semi-arid and uncultivated.

Bringing the Orient Home

At the instance of Secretary Wilson, tea culture in this country has been taken up and thoroughly studied, and the time may come when it will be extensively grown here, with the aid of information gleaned by the Department of Agriculture. Silk culture has also been thoroughly studied, and there is in the United States full knowledge of the subject. The drawback to silk culture is the lack of mulberry-leaves, and it will not be a commercial success until mulberry-trees are grown on an adequate scale. The department has now many thousands of young mulberry-trees which will be sent out to states in southern latitudes. No great amount of money is likely to come to any one person from feeding silk-worms, but it can be profitably taken up as a means of addition to the income of the family just as the raising of chickens is widely taken up.

As already noticed, the theory of Secretary Wilson is that the United States as far as possible should produce what the United States needs. The researches in tea, in silk and sugar-beet culture illustrate this. Another illustration is found in the experiments in planting Egyptian cotton in various states. From fifteen million dollars to twenty million dollars worth of this variety of cotton is needed annually in the mills of this country. It has been hard to find a region where this cotton could be grown successfully. But in lower California,

near the Salton Sea, there is a large area where the temperature often reaches one hundred and twenty degrees in the shade. There the Department has had remarkable success and has grown exceedingly fine cotton that meets the demands of the home spinners. It is the opinion of the scientists who have followed this subject that eventually all the cotton of this sort needed in this country can be grown in that part of the United States.

Instances of this kind might be multiplied. The successful growth of bulbs on the Pacific Coast is one. The introduction of Japanese matting-rush is another. The story of the difficulties under which an American explorer worked to ship the plants of this rush to this country is a striking narrative of courage and persistence amid a great many drawbacks and dangers.

Breeding for New Types

The results attained by the department in plant and animal breeding, under the constant encouragement of Secretary Wilson, could not be told in a book. One of the features of plant breeding has been the development of types of plants resistant to disease. With animals, the department has begun experiments to ascertain the effects of close breeding. In cooperation with state stations and farmers, the department has begun the creation of a new and distinctly American type of carriage-horse and of cattle for beef production under Southern conditions. Other breeding undertakings have been the crossing of the horse and zebra, the reestablishment of the Morgan breed of horses, the production of sheep especially suited to range conditions and the foundation of strains of milking Shorthorn cattle, of improved Holstein cattle, and of a breed of hens for high egg production.

Animal industry has been marked by great progress since Secretary Wilson took hold of the department. The enactment of the new meat-inspection law and its successful enforcement are familiar. The dairy industry has been vastly improved. Discoveries worth millions of dollars to the farmer have been made concerning the causes of animal diseases and the cures therefor. Prominent in the list is the discovery of the cause of hog cholera and the preparation of a cholera serum. Studies of tuberculosis in cattle have been extensive and valuable. In two severe outbreaks of the foot and mouth disease, Secretary Wilson has grappled with the situation promptly, energetically and successfully.

Extensive studies have been made and great advancement achieved in farm management. The demonstration farm work, which has been built up in the South, has proved a boon to the farmers of that part of the country. Soil surveying, which Secretary Wilson caused to be begun nine years ago, has now covered one hundred and fifty thousand square miles in all parts of the United States, a larger area than the total land area of Great Britain and Ireland or of Japan. It is leading to more intelligent agriculture in many sections and will lead to more. Great advancement has been made in vegetable pathology. Plant diseases have been suppressed and avoided in the Wilson era in a far greater degree than ever before. In a single year the bitter rot of apples caused a loss of over ten million dollars and a method of spraying trees has been devised which prevents it. Useful birds have been identified and conserved. Laws have been enacted to protect the farmer against fraud in the purchase of fertilizers, foods, feeding stuffs, seeds, diseased and insect-infested plants.

Crop reporting has been developed and perfected and, while the results are sometimes criticized, a vast army of men the country over is engaged in collecting unbiased data as to crop prospects. Road improvement has been encouraged. The weather service has been bettered. The conservation of the forests has been unremittingly encouraged. The pure food drugs act was passed, and before that Secretary Wilson had strongly urged it. He is diligently enforcing it and the good the law is doing is little short of remarkable, despite a few regrettable controversies over such subjects as benzoate of soda and the use of sulphur in fruits.

These constitute but a part of the things that have been done by the Department of Agriculture in the time Secretary Wilson has been its head. He deserves credit for them, not in the sense that he has himself worked out each problem, but in the sense that these things have been achieved under his direction and supervision and with his encouragement. He has consistently worked for the enlightenment of the farmer in all that pertains to the business of farming. Not the least of his efforts has been the promotion of the cause of agricultural education which is on the verge of developments that will go far to revolutionize agriculture in America.

What Constitutes a Good Horse

By David Buffum

This article is the foundation of a series that is going to give our readers the best knowledge of horsemanship that can be conveyed through print. Mr. Buffum is a specialist in the breeding of trotters, Percherons and small ponies; he has managed some of the best stables in the country, and is now engaged in horse-breeding on his own Rhode Island farm. He has not only practical knowledge, but an unexcelled power of presenting it. We are glad to announce that Mr. Buffum will not only give this series to our readers, but will handle their inquiries in all branches of horse lore outside of veterinary matters.—EDITOR.

THE horse, of all our domestic animals, has always held the most conspicuous place. It is easy to say that he is more showy, but less useful than the cow or sheep and that he has carried many men into trouble as well as out of it; but the fact remains that he has been celebrated in romance and poetry and song, from the days when he was admired by Solomon and when Job wrote his splendid panegyric on the war-horse, down to the present time.

Is he justly entitled to the place of honor he has thus held, and still holds, in the world? And is he worthy of the attention of the best intellects and the lifetimes of study that, from time to time, have been bestowed upon his breeding, care and management? Be assured that he is. No man need ever feel that he is misapplying his best powers in studying and improving any of the animals that Nature has given for his use. And if men have sometimes got into trouble through horses, the same might be said of almost any other thing—and, clearly, it is not the fault of the horse.

Points of the Horse

The first thing to learn in the science of horsemanship—the very A B C of the matter, as it were—is the points of a good horse. There is no doubt that a great many readers of FARM AND FIRE-SIDE already know them and equally no doubt that a great many have gone far beyond this initial chapter. But many times in my life I have been surprised to find men of mature years who had always used horses and even raised a few colts who were not as well up on the matter as one might suppose; and I have met many young men who aspired to be horsemen without having acquired that essential knowledge of the subject that is better learned by a little earnest study in the first place than by painful and costly experience later.

It is self-evident that the most important part of a horse and the first to examine is his feet and legs. For if he is deficient in this respect, no superiority in other points and no qualities in breeding or disposition can offset it. The best chair or table in the world is useless if it has only three or two legs; and the wisdom of the Arab proverb, "No foot, no horse," is apparent.

For these points, the feet of the horse should be symmetrical, neither too deep nor too flat, but, if failing in either respect, they had better be too deep than too flat. It may often happen that, on soft and level country roads, a flat foot may not occasion much trouble; but it is bad on hard roads or in cities and is, in all cases, a defect in conformation.

The limbs should be clean—that is, free from fleshiness—but have plenty of bone and substance. The fore legs should be, relatively, short from the fetlock joint up to the knee and long from the knee up to the horse's body. This is a very important point, as no horse was ever good for much on the road whose knees were too high up.

The hind legs should be flat, as well as clean. There is an old saying that they should look as if the skin had been removed, the bone scraped and the skin put back again. This excessive cleanness goes with highly-bred horses and is to be insisted on in all horses that properly belong in that class, such as thoroughbreds, trotters, hackneys, etc. In colder blooded horses we should demand at least a reasonable approach to it; as much, all may say, as the breed admits of. The gambrel joint should be strong and well developed, near slender or "dandified," and it is also desirable to have it, relatively, near the ground, though this is not as important as the position of the fore knee.

The horse should stand square on his legs with his feet well under him, and his hoofs should be straight fore and aft, neither toeing in nor toeing out.

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For the body of the horse, the back should be short.

The hind quarters should be well developed, with the hip-joints fairly well forward. The rump should be, not straight, but rather straight than drooping. That is, the line from the top of the hips to the root of the tail should be only moderately oblique. I am by no means certain that the straightness or obliquity of this line really makes much difference to the value of the horse; in hundreds that I have examined and seen

The head in well-bred horses should be small and almost as clean and bony as the limbs. The face line, viewed from the side, should be straight, not aquiline, (or, as in the case of many Arabs, it may be slightly dishing). The forehead, flat between the eyes. The eyes should be of medium size, set well apart from each other and not too near the top of the head; and the head, when viewed from the front, should slant in a little from the eyes upward. The ears should be fine, thin and pointed and of medium length,

thoroughbred. His neck, it is sometimes argued, is so different that it cannot be judged in the same way. So it is different; but if it be examined understandingly it will be found to differ only in such manner and degree as conform to his type and, not one whit less than in the thoroughbred, it should be free from undue fleshiness, clean and elegant in outline and so set on as to give a clean-cut throatle. In other words, as a good point is a good one and a bad point a bad one, the same standard must always be used—but applied in such a way as to conform to the modifications that always exist in different types and breeds.

To follow the subject a little further (for it is a vitally important one) the plea for an abatement in certain respects of the requirements for equine perfection is most often heard in connection with draft-horses. These animals, it is urged, serve a different purpose from driving stock and therefore, if they are only large and strong and smooth, a considerable departure from the embodiment of the points we have named makes very little difference. This has not been my experience. As a breeder for many years of both road and draft stock, I have found that the latter, no less than the former, brought the best prices when, apart from the distinguishing marks of their breed, they possessed the greatest number of points of general equine excellence. They were handsomer—and beauty always sells. And as the manager of large stables, belonging to the city of New York, I constantly observed that those of our horses which had the best points—short backs, good shoulders, limbs and feet and well-developed hind quarters—stood up better and lasted longer under their work than the others; and this, too, was often irrespective of size. But that breeders did not realize this—or, what is more likely, that they often sacrificed points to mere size—was evident. For the city was willing to pay good prices for its stock, and our horses were selected with care, and yet a large percentage were too long in the back and too upright in the shoulder; a great many had rather poor feet. With a greater range in regard to size these defects could, to a large extent, have been avoided; but our work called for heavy teams and we rarely bought a horse weighing less than sixteen hundred pounds.

It is in the power of man to breed horses large or small and of either a good or a bad conformation. But he greatly errs who is careless in the latter respect or who argues that good points are not always important, whatever the type. For good points were not the invention of man, but were learned by him through centuries of use and study of the horse. They are based upon the mechanism of the animal and were first decided upon by One whose judgment does not err and whose wisdom, whether in matters of horseflesh or otherwise, we cannot question.

Origin of the Horse and Formation of Different Breeds

In speaking of the origin of the horse and his early development as a domestic animal, I must of necessity be brief, for the subject is too large to discuss at length. But a few facts in this connection have a bearing upon what we can do in the modification of equine types and so have a practical value for the breeder too important to go wholly unnoted.

The horse is believed to have originated in southern Asia. His natural size is not very great, averaging about eight hundred pounds, and there is reason to believe that the original type was rather fine than coarse. All the different breeds now in vogue, ranging in fineness from the thoroughbred to the coarsest of the heavy types and in size from the little Shetland to the great draft-horses, trace back to this common origin and are simply modifications of it, wrought by environment or the skill of man, or both. This fact explains the tendency of all breeds to revert to the natural and parent type. In other words, all the variations of the original type which we call breeds have a constant tendency to drop back to where they started. The breeder of draft stock, if he becomes careless in either mating or feeding, will find each generation a trifle lighter in weight; while the breeder of ponies (if in the temperate zone) will, unless he use equal care, find each generation a trifle heavier. In like manner, as the run is the natural gait of the horse when he is go-



The Roman Horse—Clean Limbed, But Too Chunky in Body and Heavy in Neck. From an Exact Reproduction of the Statue of Marcus Aurelius (Second Century, A. D.)

put to severe road and other work I could never perceive that it did. But the moderately oblique line is far more elegant and it is one of the points of equine perfection, and, as such, should always have due consideration.

The shoulders should be slanting, not upright, and the withers reasonably high. This conformation makes a strong as well as elegant shoulder.

The body should be nicely rounded, neither gaunt nor "pot-bellied," and

and they should be so set on that, when pointed forward, they are parallel, not slanting apart.

A Standard for All the Breeds

These points of equine perfection are absolute and therefore they apply to all kinds of horses. This statement, in view of the strikingly different characteristics of different breeds, may, at first, seem wrong, but the experience of a life-time with horses of all types has convinced



The Arab Horse—Improver of all Our Present Breeds. Before the Time of Marcus Aurelius the Desert People Had Brought This Type to Perfection

should be ribbed well up toward the hips.

The chest should be deep, rather than wide, giving large lung capacity.

The neck should be free from undue fleshiness. It may be either long or short, as far as utility is concerned, the long, of course, being much more elegant and therefore to be preferred on well-bred horses. In either case it should be bent a little just before the point where it joins the head so as to give the conformation that we call "clean cut in the throatle," a structure that gives the breathing apparatus free play.

me of its truth. In judging horses of different types, the difference must be in the application, not in the standard itself; for a good horse must be homogeneous in his make-up, every part in harmony with other parts, and every part must have such modification and proportion as conduces to that end.

For instance, a hackney is a very different horse from a thoroughbred and if he looked even like the best thoroughbred, he would not be a good hackney. But it is just as important that he have a good back, a slanting shoulder and clean limbs and head as in the case of a

ing his fastest, so it is difficult (and, in all probability, will prove impossible) to breed this tendency entirely out of trotters.

Let us take a glance at what has been done by Nature and what by man in the formation of breeds. Breeds of ponies were formed by Nature in very hot or very cold countries, mainly the latter, where the horse will inevitably deteriorate in size. Climate has also some effect in other ways. But by far the greatest number of modifications of the equine

our types could not be bred successfully in all parts of the temperate zone where farming, or stock-raising could be engaged in at all. It is, of course, easier to breed them where the soil is rich and the pasturage abundant, but these accessories are not indispensable. The Arabs have always got along without them and their success as breeders can hardly be questioned.

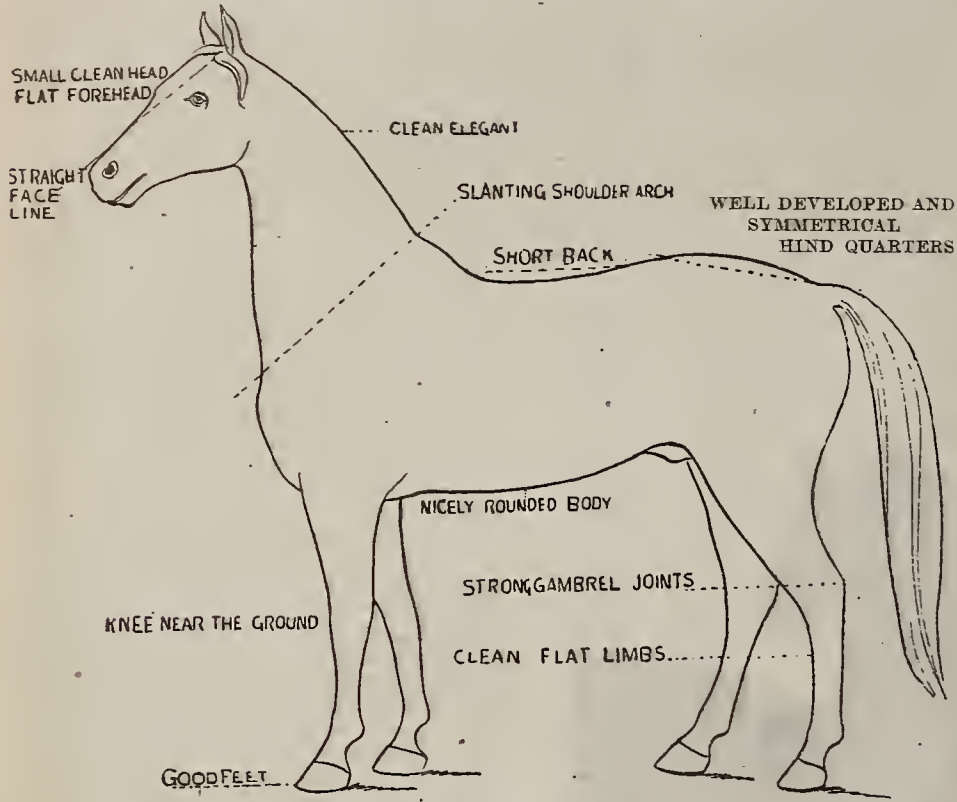
The development of different breeds from the original type began almost with the dawn of history. The Greeks made

what constituted equine beauty and grandeur; the wide chest and thick, arched neck seeming to them to present a more imposing appearance than a finer and better type. Fortunately, we know just how the Roman horse looked. The equestrian statue of Marcus Aurelius, made by an unknown sculptor some seventeen centuries ago and still in perfect condition, gives a true representation of the horse of that period and is well worthy of the study of horsemen.

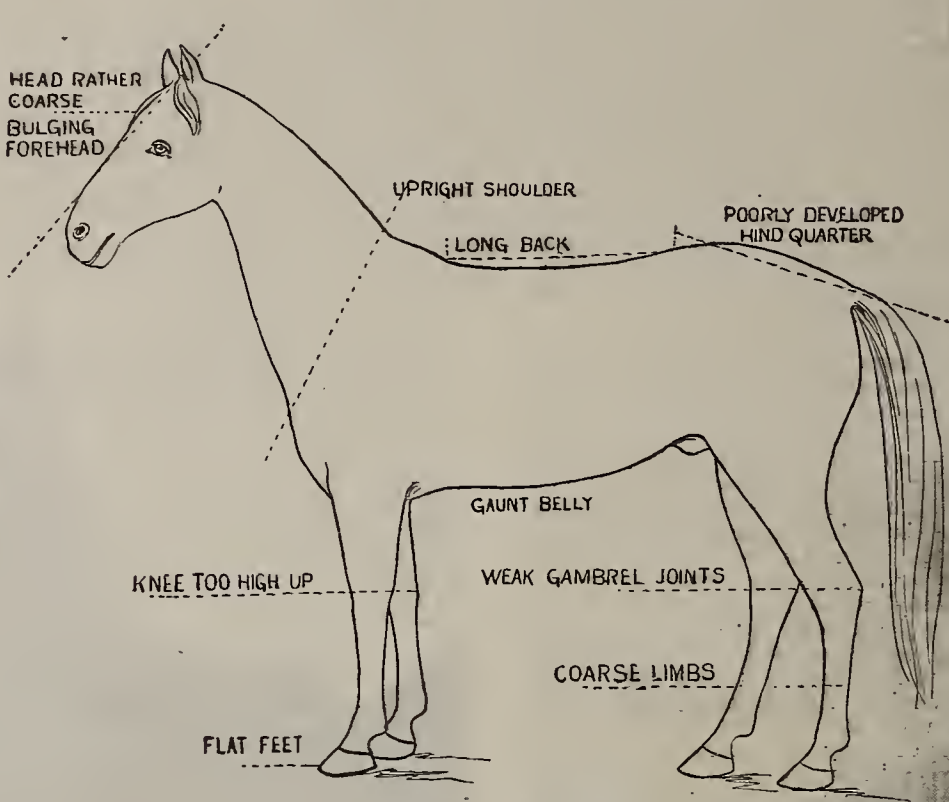
To the breeders of ancient Greece,

purity the highest type of horses the world has known.

We owe to the work of the Arab breeders all that we most value in our horses—speed, endurance, disposition and elegance of form, all came from this source. The thoroughbred, fastest horse in the world at the run, was evolved directly from Arabian blood; and in our trotters, though by a less direct route, it plays an equally important part. Count Orloff used it largely in perfecting the Orloff trotter of Russia—a wonderful animal in



A Horse With Good Points



A Horse With Bad Points

type—as the thoroughbred, the trotter, the hackney and the draft breeds—were formed by the skill of man in selecting, mating and feeding. Environment, it is true, cannot be wholly ignored; the dweller in a mountainous country, for instance, is not well situated for raising heavy draft-horses. But as a factor in the formation of different breeds and in the production of speed I have long felt that its importance has been greatly overestimated. Indeed, I have never been able to discover that horses of most of

much advance in the science and it is evident, if only from the treatise that has come down to us from Xenophon, that their breed was a good one. The Roman horse, notwithstanding the fact that the Romans owed what they knew of horse-breeding—as, indeed, the knowledge of all other arts and sciences—to the Greeks, does not seem to have been as good. He had good, clean limbs and head, but his body was too thick and chunky. This defect doubtless came from a mistaken idea on the part of his breeders as to

notwithstanding Xenophon's splendid and comprehensive treatise, the horseman of to-day really owes very little. Our most precious legacy did not come from them. But there was a race of men, even at that early day, who not only knew the form of the true horse, but also knew, as familiarly as their own souls, the laws and principles by which he was produced—the Arabs. To them be the honor of having, through all the centuries in which so much that was precious was lost, preserved for us in its pristine

many respects; and it is even claimed, with more or less show of reason, that it entered somewhat into the composition of some of our heavier breeds. All this does not prove that the Arabian is the best horse for all purposes; on the contrary, at the present age of the world, there are only a few uses for which, when bred in his purity, he is best adapted. But Arabian blood is the leaven that leavens the whole lump, the element without which our best breeds of horses could not have been evolved.

Balancing Your Soil Rations

Fertilizer Science for Every Farmer—By W. Milton Kelly

IT is a conceded fact that more than nine tenths of the complete commercial fertilizers are sold to farmers who have no definite knowledge of the value received and who are in ignorance of the real meaning of the analysis which is put on the fertilizer-sack to protect the public. This represents an annual expenditure of from seventy-five to ninety million dollars on a blind basis. Any intelligent man who will take time to read and study the bulletins of his experiment station need not continue to purchase without knowing whether he is being swindled by fertilizer agents or getting his money's worth of plant-foods.

More money is wasted on the so-called complete fertilizers than upon the purchase of the separate ingredients, so we will discuss them before we take up the subject of mixing the chemicals at home.

There are three elements of plant-food that we need to get familiar with before we can intelligently discuss the fertilizer problem from either standpoint: First, nitrogen, which promotes the growth of stems and leaves, deepens the color of the foliage, but many times retards the production of fruit and seeds if used in excess. Second, potash, which develops the woody part of the stems, the fleshy part of the fruits and assists in the formation of starch and in its transfer from one part of the plant to another. Third, phosphoric acid, which hastens maturity, aids in the use of the other ingredients and is essential to seed formation.

The Three Main Plant Foods

These three elements determine the value of all fertilizers, and the analysis on the sacks shows the number of pounds in a hundred, or the per cent of each of these elements, that each sack contains. Of the three elements nitrogen is the most expensive to buy. It is fortunately possible to develop it ourselves. Every soil can be cheaply filled with organic nitrogen in decayed roots, weeds, stubble, etc., and we can add to our nitrogen by plowing under the legumes which catch it from the air. The nitrogen in green manures and stable manures, however, becomes available very slowly, as they decay, whereas the greatest need for

nitrogen comes during the early development of the crop and not late in the season. This makes it plain that if we use any nitrogen in our fertilizers it should be in a form readily available, to supply the early needs of the crop—thus depending upon the manure, decayed roots and stubble to supply the nitrogen needed by the crop during the later stages of its growth. Where the soil is deficient in organic matter and there is no manure available, it will sometimes be necessary to use a slowly available fertilizer in which the nitrogen is in the organic form, as in dried blood, fish-scrap or cottonseed-meal; but on the average farm, where the organic matter is kept up by a rational system of crop rotation, the most economical source of nitrogen is nitrate of soda, which is readily available for the plant's early needs, and sells at fifty to fifty-five dollars a ton.

The potash had best come in the form of a high-grade muriate or sulphate. For clover, better economical results will come from the use of sulphate, but for corn, potatoes and small-grain crops muriate will prove as satisfactory. Kainit is the most common source of potash in the ready-mixed complete fertilizers. It contains about twelve per cent of potash and in addition about thirty-five per cent of common salt which makes it especially valuable for its effect upon certain plant diseases. Hard-wood ashes are also rich in potash, but they should not be mixed with any carriers of nitrogen, as they have a tendency to release this element and allow it to pass off into the atmosphere.

Phosphoric acid had best come from the acid rock which contains about fourteen per cent available phosphoric acid, or fourteen pounds in each one hundred pounds. The ground rock is derived from phosphate deposits and is treated with acids to make the phosphorus available. Dissolved bone carries about fifteen per cent of phosphoric acid, dissolved bone black about sixteen per cent and bone-meal about seven per cent. Another good source of phosphoric acid is basic slag, a by-product of smelting, which analyses fourteen to twenty per cent, but which has not seen wide use in this country.

The first point in planting a fertilizer mixture is to determine the element most needed by the soil. At best, all your experiment station bulletins can tell you is what have proven best in your general section. The only sure method is to make field tests with different mixtures, noting their differing effects upon the growth and development of the crops you intend to plant.

Let us work out a problem for ourselves. The first confusion comes with the distinction between ammonia and nitrogen. Ammonia is a compound principally composed of nitrogen. Fertilizer analyses usually give, not the amount of nitrogen, but of ammonia, which gives slightly larger figures (three seven-teenths larger). We will no doubt avoid confusion if we do our figuring on a basis of ammonia.

Nitrate of soda, then, contains about sixteen per cent of nitrogen, which equals 19.38 per cent of ammonia, or 19.38 pounds in one hundred pounds.

High-grade acid phosphate, many times called Carolina or Tennessee rock, contains fourteen per cent of available phosphoric acid, or fourteen pounds to each one hundred pounds of material. Muriate of potash contains fifty per cent of available potash, or fifty pounds to each one hundred pounds of material. It is not necessary to know what the remainder of the material is composed of.

Figuring Out a Fertilizer

Now let us make a ton of "1-8-4" mixture. "One" of ammonia means one pound of ammonia to each hundred of material, and so in a ton we should have twenty pounds of ammonia. Each one hundred pounds of nitrate of soda contains 19.38 per cent of ammonia, and to provide twenty pounds of ammonia one hundred and three pounds of nitrate of soda are required. We want eight pounds of phosphoric acid to each one hundred pounds, or one hundred and sixty pounds in the ton. This is to be obtained from material containing fourteen per cent of phosphoric acid, so to give one hundred and sixty pounds of phosphoric acid we need 1,140 pounds of acid rock. Of potash we want four

pounds to each one hundred of material, which will mean eighty pounds to the ton. Muriate of potash contains fifty per cent pure potash, and so to give eighty pounds of it, one hundred and sixty pounds of the material are required. Then we have in our mixture the following amounts of these elements:

| | |
|-------------------------|--------------|
| Nitrate of soda..... | 103 pounds |
| Acid rock | 1,140 pounds |
| Muriate of potash | 160 pounds |
| Total | 1,403 pounds |

This mixture falls short five hundred and ninety-seven pounds of a ton, but this shortage can be made up of a filler if it is necessary to use one to assist in using the mixture in the drill. This filler is what we are paying freight on when we buy low-grade fertilizers. The cost of the materials at the time I write would be, nitrate of soda from fifty to fifty-five dollars a ton, muriate of potash from forty-three to forty-six dollars a ton and the acid rock from twelve to fifteen dollars a ton, depending on the quantity purchased. To be brief, let us figure on this basis: Nitrate of soda at fifty-four dollars, rock at fourteen dollars, muriate at forty-four dollars, and we find the cost of the ton of "1-8-4" goods delivered at our station will be

| | | |
|--------------------|------------------|---------|
| Nitrate of soda.. | 103 pounds.... | \$ 2.78 |
| Acid rock | 1,140 pounds.... | 7.98 |
| Muriate of potash. | 160 pounds.... | 3.52 |

Total\$14.28

These figures are simply given to show how to figure the cost of the mixed fertilizers and determine how much of each element is required to make a certain mixture. The mixture I figured out is not recommended for any particular soil or crop. It will require hard and patient work to understand fully these problems, but if a man is using large amounts of these fertilizers he cannot afford to go blindly to a fertilizer agent or company and buy his goods on the hit-or-miss plan. There is no denying the fact that

[CONCLUDED ON PAGE 20]

Sweet Clover Its Worth and Its Culture

New Life to Worn Soils

MY FIRST planting of sweet clover as a soil-maker was on an old, worn and almost completely exhausted field, one that had been thrown out in the commons. A five or six years' growth of scrub oak and sassafras bushes covered the ground where the washes and gullies were not so numerous as to prevent their growth. The soil, geologically speaking, once was a clay loam (now all gone). The subsoil was yellow clay underlaid by a stratum of clay, sand and gravel. I give this full description of the condition and the character of the soil because there are so many similar farms in the same condition, not only here in Kentucky, but through the whole Mississippi valley, north and south, and there are so



Seedling Sweet Clover

many farmers that might be benefited, if they only would be, by sowing sweet clover.

The oak and sassafras bushes were cut and piled in the gullies, the top of the brush was laid up the hill so that the forks of the little limbs would catch the trash; this would catch other trash and earth, which would fill in around the larger brush and soon fill the gully. The backbones, or little ridges, between the gullies were dug off into the gullies and tramped hard onto the bushes. The larger ridges were plowed and harrowed, then the entire field was sown in the spring to sweet clover and blue-grass.

The sweet clover came up nicely the first season, but the blue-grass did not come up until the second; then the sweet clover was tall enough to shade the tender grass through the heat of summer and to protect it through the winter. At the end of the second season, when the sweet clover went to seed, there was a growth of the sweet clover fully six feet tall and heavy enough to hide a sheep any place in the field. The blue-grass was five or six inches tall, but thin on the ground. When the ground was dry, during the fall and early winter, this field was pastured with a few mules and horses; in feeding on the grass they trod down the dead sweet-clover stalks, which served as a mulch to the seedling sweet clover and prevented the ground from washing. At the beginning of the third season a fine crop of the sweet clover came up, which with the blue-grass made fine grazing.

How to Handle Sweet Clover

The amount of (hulled) seed to the acre, for hay, is thirty pounds; that for pasture and for green manure, as in cases like the above, is fifteen pounds. As the stems or stalks of sweet clover become hard and woody, when thoroughly developed, it is necessary, to secure good hay, to sow the seed so thickly that the plants are dwarfed. But for the building up of old fields and to seed to pasture we want a large growth of plants, which will give us the largest amount of seed the second year and large stalks to protect the young grass; hence we sow less to the acre.

I have tried spring, summer and fall sowing, and found a very little difference, as the seed germinates slowly, when sown at any time. If sown in the spring, I would advise sowing with it a light seeding of spring oats. I have found that to follow along Nature's lines in seeding, or, in other words, to sow the seed of grasses just after the time of the ripening of the seed, will give a good stand, other conditions being favorable.

Where grown for hay, sweet clover should be harvested twice the first season. It will not go to seed the first year if it is cut twice. Where it is cut twice the second season there is very little seed formed. The plant of sweet clover dies at the end of the second season.

Sweet clover should be cut a little earlier in its growth than alfalfa, as the stalks are more of a woody nature; just before the first blossoms appear gives the best quality of hay.

The great difficulty with sweet clover has been its unpalatability to stock. In grazing on young plants, however, the stock begin on it when other grass is short and they gradually become accustomed to it. I note in particular that horses, mules, sheep and cattle take to it readily, when turned on it during a dry time when pasture is short; it is not affected by extremely dry or hot weather, as other pastures.

There is quite a difference in the palatability of the tender green plant and the cured hay. The plant develops the bitter or acid flavor when about half-grown, or about the time to cut for hay. If, however, the sweet clover is mixed with other hay in feeding the stock at first, they will soon develop a taste for it, and will prefer it to other hay.

There is quite an advantage in sowing sweet clover with alfalfa, ten pounds of sweet clover and twenty pounds of alfalfa. The stalks of the sweet clover hold the alfalfa from falling, and the mixture makes a splendid hay.

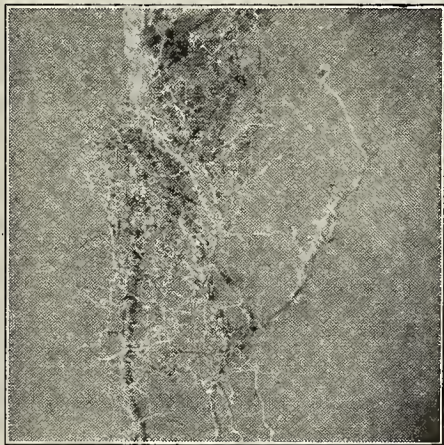
J. W. GRIFFIN.

Further Testimony

A FEW weeks ago while taking a buggy ride through this county, my traveling companion pointed to a lot of dry weed-stalks lining the roadside and said: "I wish the highway superintendent would have those cut when they ought to be cut. They are the worst weeds we have."

"Not so," said I, "but one of the most useful weeds we have, and one holding much promise, but never a pest." It was sweet or melilot clover which here, as in many other sections, is found in great abundance on roadsides, railroad embankments and waste places. It covers such spots with thrifty verdure, furnishes bee pasture for many weeks, and if we only knew how to handle it just right, would be serviceable for other useful agricultural purposes.

Years ago I called attention in these columns to melilot clover as one of our most promising cover crops and soil



Root Mass From Mature Plant

renovators. It gives an astonishing lot of green stuff in a surprisingly short time, and it draws nitrogen from the atmosphere equal to vetch and alfalfa. In its earlier stages, sweet clover closely resembles alfalfa, and from the looks of both I should think that there might not be much difference in the taste. One of my cows, when tied out in a meadow, ate the grass down well to the ground but left the alfalfa-plants untouched, just as another in another patch left the sweet-clover plants, until the one became used to the taste of alfalfa and learned to eat sweet clover. I find my cattle will eat alfalfa and sweet clover, cut young, as well as vetch (another plant at first rejected) with apparent relish.

I am glad to see the real merits of melilot clover more and more appreciated, as may be seen in the columns of recent issues of FARM AND FIRESIDE and other agricultural papers. Hundreds and thousands of acres in the suburbs of our cities, and other unoccupied lands in their vicinity, are annually covered with a dense mass of sweet clover, and all of this is allowed to go to waste, as may be seen by the dead and leafless stalks every fall. If cut in proper season it might be utilized for food for horses, cattle, swine and poultry in the closed season. It has the same food value as alfalfa-meal. When the sweet-clover plant gets old and tough and woody and loses its leaves, it has also lost its feeding value. Secure it in time.

T. GREINER.

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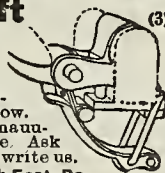
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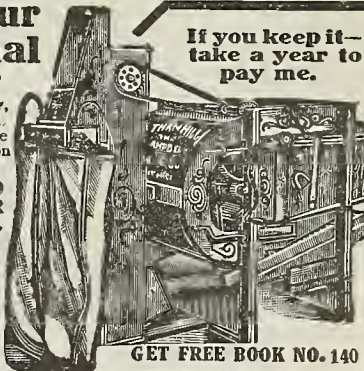
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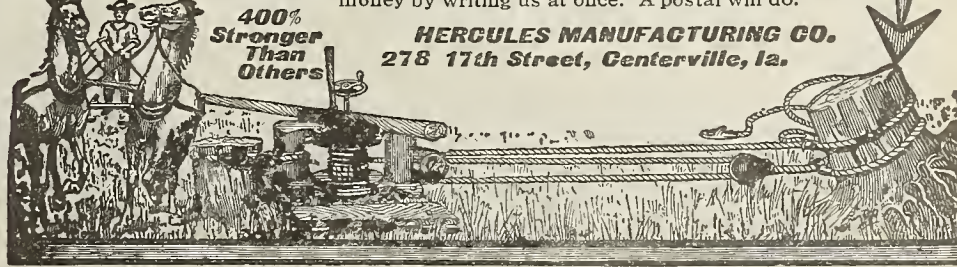
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Fruit-Growing

By Samuel B. Green

Apple-Trees Falsely Named

A LETTER from G. H. S., Newport, Virginia, states that a New York nurseryman sold him a number of apple-trees supposed to be salable varieties, which, when they commenced to fruit, were found to be crabs and other unsalable varieties.

I am not well acquainted with the nursery to which you refer, but think they are still doing business. I believe, however, that while you might be able to get legal redress, it would be expensive and unsatisfactory.

I think the best way is for you to take your grievance as good-naturedly as possible and try to top-work these trees with good standard varieties, and next time buy of some reliable nursery. It is more than likely that some one in your vicinity is handy at grafting, and I would suggest that you have this work done this spring. The scions for this purpose would be all right if cut in the spring in your section, as they are seldom injured in winter. It is, however, a good plan to cut what scions you need for this purpose on mild days in winter, storing them in a cold cellar in moist, not wet, sawdust.

These three-year-old trees ought to be in first-class condition for top-working. I would suggest that you do not graft on any branch over three fourths of an inch in diameter; grafts on large branches are frequently weak and break away, even if they seem to have made a good union. This is especially the case where they load up with fruit the second or third year.

It matters little whether you use a whip graft or a cleft graft; there is no choice between them under average conditions, although the whip graft is rather the easiest to use on small branches. Work the branches in the center of the tree and not the side branches, since these soon bend to the ground with the load of fruit and are in the way.

In top-working, do not pick off all the foliage except that on the scions, as is sometimes practised. In my experience, it has proven far better to allow a reasonable growth of foliage on the tree, and not attempt to throw all the strength into the graft the first year; but if any very vigorous shoots appear on the tree aside from those on the grafts, I would pinch them, so as to throw nearly all if not the entire strength of the tree into the grafts. If the grafts make a very vigorous growth I should pinch them at twelve inches, which will cause them to branch, and the growth will better withstand the winds than if allowed to run rampant.

If these trees are grafted early next spring with good varieties, the trees should bear well in about three years.

means to have it destroyed. I would suggest that you write your State Experiment Station at Amherst, Massachusetts, sending them specimens, and ask them to advise you as to the best defense against it. In cases like this, where the trees are small and badly infested, it is generally best to burn the whole tree. This scale is hardly recognizable by the average person. It looks like dust or dirt which has collected on the branches, and all the growth may be involved, and even the leaves. When examined under a microscope, it will be seen that the scales are roundish in form, with a well-defined center. Where trees are to be sprayed for protection against the scale, it is generally best to do it on mild days in winter, as when the tree is dormant a stronger spray can be used than when it is growing. The lime-sulphur wash is very effective against the scale. Several of the patented applications are also convenient and useful.

The plum-twigs sent are affected by what is known as "black-knot." This disease, in connection with the curculio, was sufficient to nearly stop the growing of plums in our Eastern states for a number of years, before we found how to prevent their ravages. The spores spread from the rough, irregular, blackish growth found on the branches, soon send their root growth into the tissues, and bring about the morbid growth known as "black-knot." The best way of treating it is to cut out and burn as much as possible of the infested portion, and then paint the wounds with thick Bordeaux mixture made from the formula: Five pounds of lime, five pounds of sulphate of copper and twenty-five gallons of water. This is too strong to apply to the foliage, but is the proper mixture to apply to the dormant growth after the knots have been removed.

Apple-Seed for Stocks

W. J. D., Everett, Washington—The word "stock" as here used is applied to young apple-seedlings, generally not over one year old, used for root grafting in the winter. These are grown by the millions every year for propagating apples. They are kept in cold cellars over winter together with the scions, when the roots are cut up and grafted with the scions, and in the spring of the year planted out like cuttings.

In a mild climate like Washington, the seed of almost any cultivated variety is desirable for growing apple stocks. Of course, ideal seedlings would be those from such vigorous trees as Jonathan, Ben Davis, Duchess of Oldenburg, etc., but these are not easy to get. It is generally customary to buy apple-seedlings from sections where cider is made in large quantities, the seed being washed out of the "cheese" left after the cider is extracted.

What is known as Vermont apple-seed has long been popular in Minnesota and the Dakotas, where the climate is severe. These would do well in Washington; but there are undoubtedly stocks of seed to be obtained nearer home that would answer as well.

It is difficult to get seed that will germinate well. Much of this trouble comes from allowing the cheeses from which the seed is extracted to ferment, which hurts the seed. The seed should not remain long in the pulp, but should be washed out promptly.

The Best Kind of Root Grafts

Mr. P. H. P., Excelsior, Iowa—You ask whether I prefer whole crown or piece root grafts, long or short piece roots, long or short scions for Iowa. I prefer to use medium-sized roots grafted at the collar, the roots to be cut off about three inches long and scions about five inches long; but this is rather a wasteful way of handling roots, which are this year high in price, and if I were grafting any this year I should aim to use a five-inch scion and three-inch root, and make two or more grafts from each large root.

I do not think it makes a great difference as to the way in which the root graft is made, but much more depends on the way in which it is handled after it is planted out. A good, vigorous scion, even if worked on small pieces of root, will often make a satisfactory growth, and after the tree is established I do not think the way in which it was propagated has any effect upon the root system or upon its hardiness. Of course, it is desirable to have the root well below ground in Iowa and Minnesota, and, hence, it is generally best to use long scions.



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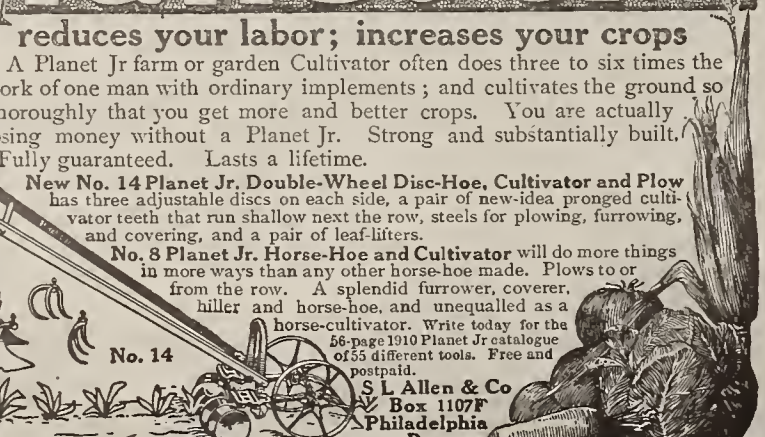
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Gardening---By T. Greiner

Companion Cropping

A LETTER comes from J. H. O., a reader in Connecticut, who wants to know "whether it is possible to grow two crops of any kind of vegetables on the same soil in this region and, if so, what kinds." I think I have spoken of this before. Yet it is an important subject. People living in or near larger towns or cities often have but little land at their disposal and wish to work it for all it's worth. The market gardeners near our large cities always do that. But they raise largely small stuff and quick-growing crops. They use vast amounts of manures which hastens these crops into marketable condition. They can grow radishes in little over four weeks, lettuce in six weeks, cresses, soup celery, small table beets and carrots, etc., in a correspondingly short time. They plant their early cabbages so close that the heads almost touch, and have the crop ready for market in July. They have cabbage and celery plants ready in May or June. They push all these crops into strong growth by thorough cultivation, and put them on the market at the earliest possible opportunity, clearing the land and getting it ready for the next crop. That may be something of the same nature—lettuce, radishes, turnips, dill, cresses or other herbs, beets, carrots, onion-sets or possibly snap beans, celery, late tomatoes, etc. The selection of crop depends largely on chances of sale or demand.

The question has a different aspect for the home grower who, from a limited garden area, desires a full line of vegetables for his own table. We plant some things that cannot be risked outdoors until warm weather sets in, and a good many that for a number of weeks after planting do not occupy the entire space. Among them we have tomatoes, cucumbers, melons, squashes, etc. Between the wide rows of such running vines we may, in early spring, plant rows of first early peas, or earliest cabbages, or early potatoes, or radishes, etc. Then in proper season we make the hills, midway between the rows of the crops already growing, and plant our melons, cucumbers or squashes, either by seed or by setting plants started in strawberry baskets or on inverted sods in the greenhouse, and afterward take pains to remove the first planted crops promptly before the running vines require the full space. Between the rows of early cabbages, of early peas, etc., as well as on the patch intended for tomatoes, we may sow radishes in very early spring, and thus we can often manage to grow two, or even three, crops on the same ground in one season. It must be largely left for each gardener to make his own combinations, according to his wants, his tastes and his opportunities.

Soil for Onions

A Meadville, Pennsylvania, reader asks me whether onions can be raised on any kind of soil if it is properly manured.

I have worked soils on which, even without special treatment or special manuring, one had only to plant any garden crop to be reasonably sure of a big yield. Such productive soils are usually well supplied with humus as a result of original supply, as in mucky soils, or of skilful manipulation and cropping, clover rotation, manure applications, etc. In such soils the fertility and yielding capacity is easily maintained or increased indefinitely by even small dressings of manures or fertilizers; clover, to replenish the humus or vegetable fiber supply, should not be forgotten.

I would say that if you have soil which raises good crops of celery, beets, cabbages, lettuce, etc., you can also raise good crops of onions on it.

Effect of Soil on Quality

My first choice of soils for onions is that of a decidedly sandy character. Nothing can be much better than a sandy upland loam—such a soil as is quite generally found in the gardening regions of northern New Jersey or Long Island. Under such conditions the bulbs come to full maturity during warm and dry weather. They are well finished, with small necks, and when well cured show superior keeping qualities.

Next to sandy loam I value well-drained sandy muck, which will often grow big yields of enormous bulbs. If the soil is more mucky than sandy, and rather moist, the bulbs are liable to be a bit soft and perhaps thick-necked, which greatly impairs their keeping qualities. In my own case I have to content myself

with the heavier loam. It contains much clay and some sand, while the humus supply is carefully maintained by annual dressings of stable manure. On soil of this kind I have always been able to raise big yields of onions of the Spanish type, by the transplanting method, also good crops of green or bunch onions by sowing seed in open ground about August 1st and leaving the seedlings out in the open during the winter. But I have been entirely unsuccessful in growing the standard varieties directly from seed sown in open ground in spring. Some of my neighbors, on soil of nearly the same character, however, have grown fine crops of Danvers, Yellow Globe, White Globe, and even Prizetaker directly from seed. Altogether, I believe, unless a soil is very stiff and hard, one can almost always succeed by the use of clover, manure, tillage, etc., in growing a crop of Prizetaker or Gibraltar onions (sweet Spanish) by the transplanting method, known as "the new onion culture."

Wintering Cabbage-Plants

A Washington reader wants to be told "the best way to keep young cabbage-plants through the winter for early spring planting." Whether the old way of raising early cabbage-plants in the fall and wintering them over in cold-frames, so long practised by market gardeners around New York and other Atlantic Coast cities is also the best way, depends very largely on local and climatic conditions. The severe winters in my own locality, for instance, make it almost hopeless.

It is a very particular job anywhere. Seed may be sown in open ground about

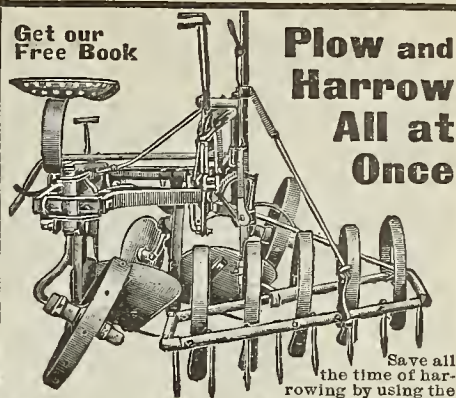
the fifteenth to twentieth of September, and the seedlings afterward transplanted to cold-frames, say, two inches apart in rows three inches apart, and kept growing as long as they will, then held dormant until early spring, when they are ready to go into open ground. To handle them just right, to give them ventilation or covering as the weather may require, calls for skill and experience and close attention.

I prefer to sow seed early in February in flats or on the plant-house bench in a moderate temperature, then prick out the seedlings into flats or cold-frames in March, and put them out in the field in April or May. Cold-frame-wintered plants, however, have the advantage of superior hardiness. After being set in the open they will stand frost and exposure that would ruin greenhouse-grown plants.

Celery Without Fertilizer

"Can celery be raised without fertilizer?" asks an Oklahoma reader. It depends on the character of the soil. If that is very rich, like virgin soil, a good growth may be secured without either manure or chemical fertilizers. However, growing celery without manure is not the practice of the good gardener. Good stable manure or compost is the best and safest of the plant-foods for celery, and we add to this wood-ashes, poultry-manure or anything we have in this line. Sometimes the sweepings of a near blacksmith-shop are available or street sweepings from a near city. It is optional with us whether to use commercial fertilizers also. We can do very well with stable manure alone, but the others help.

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Send Now For Sample of This Great Corn—Then Name It

Now, somebody is going to win, and that "somebody" might as well be you. All you have to do is offer the name that best suggests this very finest breed of corn. That name may seem quite common-place, but if it fits, you win. Begin thinking up this name now! If you succeed, you will be richer by five hundred dollars; if you do not, you are not out a penny—and you will have received generous sample of this "Nameless" Corn big enough to grow a half bushel of seed.

The Judges

Hon. John J. Esch, Congressman for Wisconsin; Prof. R. A. Moore, Wisconsin Agricultural College, Madison, Wis. and Hon. Robert Calvert, U.S. Customs, LaCrosse, Wis., all prominent men, will act as judges. They are not only men of integrity, but of keenest judgment, as well. The name you offer will be sent to them when it comes to us. They will choose a name without knowing who suggested it. Contest closes in a few weeks. Every seed buyer, regardless of age, sex or residence, has an equal chance.

TO ENTER THE CONTEST—Write for sample packet of "Nameless" Corn. Enclose two 2c stamps. (You will receive with the Sample Packet and our Mammoth New Seed Book, a FIVE CENT CASH COUPON worth face value when you purchase 25c worth of Salzer Seed). Examine "Nameless" Corn; its remarkable appearance will at once suggest a striking name. You will be promptly notified, and the money delivered to you should the judges decide your way. If you suggest the same winning name that somebody else does, you get the prize anyhow—if your letter is postmarked first. So get your "Nameless" Corn Sample at once and be ready to win the Big Prize.

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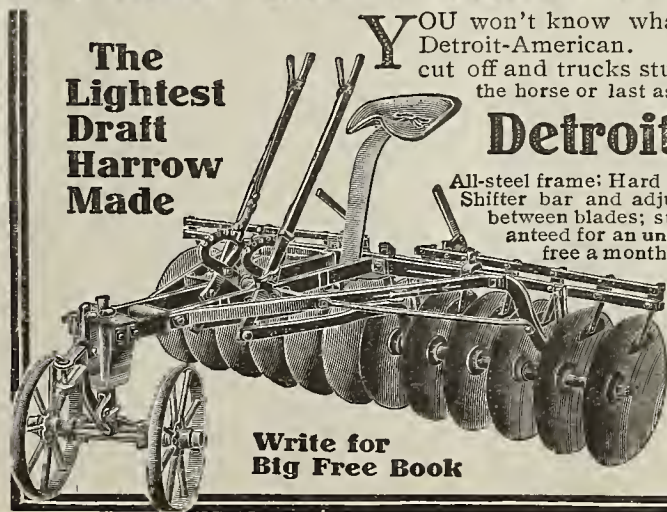
Try this year Salzer's Wonderful "6 Weeks" Potato! Earliest variety known; brings top market prices. See page 126 of the Salzer Seed Book. On pages 101-102 will be found full particulars regarding the prize of 100 acres of Wisconsin farm land that Mr. Salzer offers for the largest yield of White Bonanza Oats during the season of 1910. Better send for a copy and see what he has to say about it. Brimful of rare, heavy-yielding Farm and Vegetable Seeds—140 big, interesting pages on Farm Seed, Plants and Tools. Let it be your helpful guide in selecting every kind of reliable, fertile farm seed you want. It is FREE. Send 4c in stamps for Corn Sample and enter Contest.



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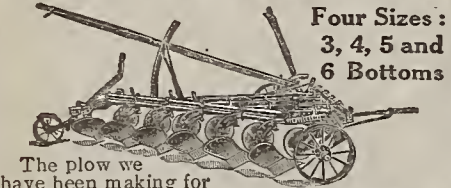


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Farm Notes

Orchard Cultivation

THE best kind of cultivation of an orchard is a subject that has called out much discussion. It can be laid down as a general rule, however, that where the rainfall in summer is deficient, it is extremely desirable to cultivate the soil thoroughly, and keep a dust mulch at least four inches thick on it at all times, to preserve the soil moisture.

As a rule, I believe in clean cultivation of orchards, but where they grow on hillsides that are liable to wash, it is desirable to seed them down occasionally. Continued cultivation hastens the using up of humus in the land, which binds it together against washing. In the Eastern states, where the rainfall is generally sufficient, it is usually desirable to cultivate the soil for, say, five years, then seed it down to clover for a couple of years and then plow it up again.

Some experiments made at the Ohio Experiment Station show good results from orchards not cultivated at all, where the soil about the trees has been mulched for a series of years.

I am inclined to think that this mulching of the soil would work better in Ohio than in northern Michigan or Wisconsin, where the ground is cool all summer, and yet I know of some cases, even in these cold sections, where orchards have been grown successfully mulched. In parts of Minnesota and the Dakotas where the snowfall is light in winter, some of the best apple-growers follow the practice of winter mulching to protect the soil from deep freezing. This is especially true where there is no snow on the ground, and I have seen many orchards grown with a combination of mulching and cultivation, the soil being mulched six or eight feet from the trees in all directions, and the land between cultivated.

It will be seen that in the matter of cultivation the orchard is something that calls for considerable individual judgment.

SAMUEL B. GREEN.

The Wonderberry—Pro and Con

HASN'T the "Wonderberry" taken up about enough space in the agricultural press? We should be sure that it had if we were not in receipt of so many letters about it. We are publishing the latest few—some serious and some not so serious. The Wonderberry has been "identified" as so many different things that we are inclined to credit it with originality. As to its usefulness, Mr. Greiner sums it up—pleasant when treated right. After this writing, FARM AND FIRESIDE will, for some time now, drop the discussion of the three topics: Doctor Cook, Who Struck Billy Patterson and the Wonderberry.

EDITOR.

The Wonderberry is the same thing I bought three years ago, advertised in a

farm paper as the "mulberry tree." It was not like the real mulberry; it bore fruit three months after seeding, but the fruit was worthless. It has been seeding itself ever since. It is only a wild plant. Quebec. CHAS. HUGHES.

I was one of those who were attracted by the advertisement and jumped at the great, luscious berry and missed it very far. Having dealt satisfactorily with John Lewis Childs before, I thought there was no chance of deception. Mr. Childs may still think the Wonderberry has value, but after trial I disagree with him. The taste would not entice anybody. My neighbors all wanted seed until after they tasted the berries. I did not save any myself; in fact, I am figuring out a scheme to get rid of what I scattered over the ground.

Utah.

RJON ISBELL.

I am going to write to whom it may concern. I read S. I. Lee's piece about the Wonderberry in your paper. I do hope no one will get scared out of raising that berry because Mr. Lee did not like them "with sugar and cream" on. I don't suppose Mr. John Lewis Childs or Luther Burbank or whoever made them calculated them to be served in that way. In my opinion if those men made any mistake at all it was in not stating (for the benefit of the unthinking public) that they made them for pies.

Folks oughtn't to look for the perfection of things hybridized in California to compete with the fruit hybridized in the Garden of Eden.

The Wonderberry is equal to the blueberry for pies and can be grown successfully where it is impossible to get that fruit (except in tin cans), and we folks out on the plains are thankful to whoever made them for such good pie stuff. Maybe you would like my recipe: Just make them as you would any berry-pie.

Now don't anybody tell me I don't know what good blueberry-pie tastes like, for I do. I was raised in a blueberry-patch way down East.

I don't suppose Mr. Lee or his neighbors would like raw "punkins" with sugar and cream on; but that is no disgrace to the "punkin" and no reason for folks to stop raising them. Judging from the name and the wording of the article, the writer must be English with a big E. I came near being English myself, if my great-great-grandfather hadn't moved to America; now I calculate I am as much English as Solomon's Nigger—if that's the name—is a Wonderberry.

Colorado.

SCILLA BRIGHT.

Frequently what one person finds delicious another detests. Tastes differ. So do cooks. The same thing, prepared in one way by one cook may be delightful, and prepared in another way by less skilled hands, quite the reverse.

Take, for instance, the husk tomato, known variously as cherry tomato, ground-cherry, Cape gooseberry, etc. The common sort has fruits of large cherry size, yellow, semi-transparent and sweetish, inclosed in a husk. When ripe, the fruit drops off, and, protected by the husk, may remain in good condition for weeks. We gather them from the ground in late fall for preserves and pies, with the addition of lemon, etc., for flavoring. We have had pies so delicious that it was decided in the family council to have a larger supply next year. Yet many persons find this fruit "sickish sweet." The majority of home gardeners hardly know it; yet undoubtedly it deserves a place in our gardens better than any member of the black night shades.

The garden huckleberry or Wonderberry is another illustration of how tastes differ. I have been puzzled to reconcile the greatly varying estimates made of it.

One of those who finds it delicious sends me a generous sample of this black fruit which is of large huckleberry (small wild cherry or large green pea) size, and contains a dark blue-black juice that in an emergency can be used, in its pure state, in place of ink. In fact, I have written a number of letters with it, and one can hardly tell the difference between it and good commercial ink. The man who gave me the berries tells me that when used for pies and preserves, and flavored with lemon and rhubarb, the dish is quite palatable, and to many, on first taste, even delicious. Nothing strange about that! I have before this become enthused over preserves made of green tomatoes, and even of field pumpkin, of course with the addition of lemon, citron, raisins or other things for flavoring. But if you want to make your own ink, try the Wonderberry.

New York.

T. GREINER.

Money in Early Tomatoes

One of my customers sold \$102.35 worth of big, red tomatoes from 100 plants in his back yard. Another from 14 plants in her flower garden, sold 312 lbs. during July and August for \$10.70. It's all in the knowing how and in using the right seed. They used my new tomato—

Field's Early June

Earlier than Earliana, as handsome as Stone, as solid as Ponderosa, and a greater yielder than any of them. The greatest new tomato in 25 years. Small pkt. 20c; 3 for 50c; 1/2 oz. \$1. (This for specially selected seed, saved early.) My Garden Manual and Seed Catalog will give you lots of pointers and good advice about gardening. It's FREE—and people who claim to know say it's well worth reading. Get it and see.

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Superior Grain Drills are used with success, satisfaction and profit by the most successful farmers in all parts of the world where grain is grown. It matters not where you live, what your seeding conditions are, what seeds you wish to plant, or if you use fertilizers, how obstinate they are to handle, you can get a Superior Drill that will do your work in the best possible manner with the least labor for man and team. Superior Drills must do all that is claimed for them, for they are sold with a plain, honest guarantee that means much to the purchaser. Write today for a Superior catalogue to The American Seeding-Machine Co., Incorporated, Springfield, Ohio. Then go to your retail implement dealer and insist on seeing the Superior Drill. Take no substitute.

What Farmer Boy Will Get the \$1000 Farm?

I will give a thousand dollar farm for the best ear of corn grown by a farmer boy in 1910. The next ten best ears draw a \$50.00 town lot each. 40,000 other prizes for good ears. Every farm boy in America can win a prize if he tries. Fine Pedigree Seed furnished absolutely free to grow these ears by the man who has done more for farmer boys than any other man in the world. Write today for all particulars, free of charge.

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Write for Free Booklet

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AVERY UNIVERSAL CULTIVATOR

Here's a letter from C. K. McClelland, Supt. Ft. Hayes Experimental Station, Ft. Hays, Kansas, dated July 30, 1909, about the Avery Universal Cultivator.

"I want to tell you what a pleasure it has been to observe the splendid work of the Universal Cultivator at our station. The new features you have introduced into this successful riding cultivator make it about the best machine of that nature on the station. The man who has been operating it says your claims cannot be disputed. The cultivator is so well balanced, its mechanism so simple of arrangement, and the feature of taking the weight off the horses, making its working a satisfaction to the operator. The simple, handy levers for regulating the depth, and depth-governing springs are the best ever seen."

The Avery Perfection Planter insures a more uniform depth, because short-coupled. A more uniform drop because new automatic side cut-off plants the big grains. Less work for operator because planter has automatic self-lift and two markers. Less work for team because lighter draft.

The Avery Universal Cultivator has such splendid features as adjustable arch, balance levers, accurate depth regulators with cushion springs. All this in addition to the features which years ago made Avery Cultivators famous, including double-acting light springs, rod fenders, special shaped shovels. Avery has the reputation of "Going in," easy handling and long service.

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Destroy the fungi and worms, and thus be sure of large yields of perfect fruit.

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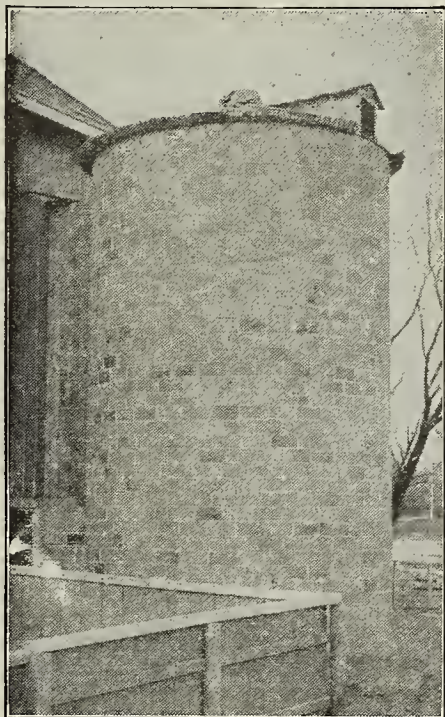
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Tile Silos—A New Development

THE Iowa Experiment Station has been conducting an interesting series of experiments with the various materials used in silo construction. For some time a need has been felt for a more satisfactory silo-building material than any of those in general use. The easily-erected stave silo has given good satisfaction, but with the growing scarcity of lumber is becoming too high priced. In some cases the quality is being reduced also. A good redwood, cypress or Oregon fir stave silo will last as long as twenty years if properly cared for. The lumber that is being put into some silos to-day will not last more than five.

Cement has been much lauded as a silo material, and deserves much of the praise that has been given it. The chief objection is the difficulty of erection. To build a cement silo properly, expensive forms are needed, and the work must be done by experienced men. A cement silo improperly built is only a waste of material. Single-walled cement silos permit the silage to freeze even worse than in a stave silo; double-walled cement construction obviates this, but adds considerably to the expense.

To get around the practical difficulties of silo construction with these materials, M. L. King, of the agricultural engineering department at the Iowa Experiment



One of the First Tile Silos

Station, has devised a silo built of common building-tile. These tile must be hard burned to be durable, and can be used more conveniently if curved to correspond to the curve of the walls. Already a number of the tile manufacturers in Iowa have arranged to supply these curved tile at little additional cost.

The tile are laid horizontally around the silo, the joints being laid in cement mortar. The work can be done well by any mason who has handled brick. Indeed, a little practice will enable any handy farmer to do the work himself. Steel wire laid around the wall in the mortar joints makes a good means of reinforcing. For a silo sixteen feet in diameter and thirty feet high, eight strands of No. 9 wire will be needed for reinforcing. After the silo is up, the inside should be washed with a thin mortar of pure cement to make it absolutely air and moisture tight.

The foundation for a tile silo need be no different than for any other kind. It is economical to have the silo extend three or four feet into the ground. If vitrified tile are used below ground, protected on the outside by about four inches of concrete, no other foundation will be needed.

The door frames are made of concrete, the doors themselves containing the only wood used in the building. At a small additional expense a chute of tile can be made in front of the door, extending all the way up. If this is done, the steel reinforcing can pass around the chute, and the doors from the chute into the silo may be made much higher than common, thus avoiding the usual stooping in getting in and out of the silo, and making the silage removal much more convenient.

The advantages of a tile silo are its comparatively low cost, its durability, ease of construction and freedom from freezing. The numerous dead-air spaces, divided into small sections running around the silo, make it almost non-conducting and reduce freezing to a minimum. Tile is as durable a material as cement, and a tile silo costs but little more than a single-walled cement silo. It can be erected as cheaply as the best grade of stave silo, and will last a great deal longer. The estimated cost of a tile silo thirty feet high and sixteen feet in diameter, where all the work is hired done, is about three hundred dollars.

C. V. GREGORY.

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GREAT WESTERN Spreader

This picture shows the front end of the GREAT WESTERN Manure Spreader.

It looks good, doesn't it?

Let's begin at the bottom and tell you more about GREAT WESTERN construction—The front axle is made of cold-rolled steel shafting. Mounted on this is a big, heavy, OAK axle cap, clamped on with FIVE clips. Above the axle cap is securely bolted a great, big, strong, 16-inch MALLEABLE circle, or fifth-wheel, braced front and back with MALLEABLE braces. These braces are bolted solidly to the axle cap and take in the steel axle as well. This makes the front end of a Great Western so strong that you can put on the largest load of wet, heavy manure, and hitch on as many horses as you wish. WE GUARANTEE you can't pull the front end out or break it.

On top of this big 16-inch fifth-wheel, you will see two short OAK braces, and bolted on to them are the two big, heavy, 3x5-inch OAK BOLSTERS.

The big, strong iron brackets on each end of the bolsters weigh 25 pounds each, and the connection with the silos or frame is SOLID.

The Great Western has the only automatic oscillating fifth-wheel made. If one front wheel drops into a hole or a dead furrow, it opens up just like a spring wagon and the body is not twisted out of shape. You can see that this twisting of the frame, going over rough ground, makes the manure bind on the sides of the bed. That means heavy draught.

WHAT DOES THIS MEAN?

The FRONT END of the manure spreader is a VERY important part of the machine, because you pull from it. The spreader always carries a heavy load, and you need the BEST material and STRENGTH in spreading manure on frozen ground, in corn stubble, going across dead furrows, etc. It NEEDS great strength, doesn't it?

LET US REPEAT—with the GREAT WESTERN construction you can't put horses enough on or load enough on to pull the front end out or break it.

PLEASE REMEMBER that every stick of wood shown in the above picture is OAK, and that the 16-inch fifth-wheel and all braces and clips are the best MALLEABLE—and NOT cast iron. The Great Western is the "World's Best" today, and all we ask is that you make comparisons. Investigate and THINK before buying. Breakdowns with a manure spreader are expensive and dangerous to both the man and team, so you want to buy quality.

BECAUSE of the great strength and proved superiority of the GREAT WESTERN Spreader, because it stands head and shoulders above all cheap imitations and light machines on the market.

We Guarantee Every Great Western Manure Spreader to Have

50 per cent less breakage **50 per cent more strength**
More Oak, Hickory, malleable and high-grade steel; 50 per cent more wear and service than any other spreader made.

It's true, that a high-grade machine, like the GREAT WESTERN, built out of the very best material that money can buy, cost more to start with, but it's by far the cheapest in the end. Don't let anyone sell you something that they say is just as good, and charge you as much as you would have to pay for a GREAT WESTERN. Don't be fooled. When you go to buy a spreader, know for yourself what every part is made of. Take your knife and see that the timber is OAK; take your rule and measure the parts; take a sledge hammer and pound the fifth-wheel. It pays big to buy the best.

If you are interested in increasing your crops and building up your farm, please write us to our nearest office for our large free Art Catalogue No. D 56. We will gladly post you on what to look for, and what construction means in a manure spreader.

Smith Mfg. Co., 158 E. Harrison St., Chicago
Minneapolis, Minn. Columbus, O. Omaha, Neb. Indianapolis, Ind.

GREAT WESTERN

Western Electric "Bell Grade" Telephones

for exchange or farmer line work are the recognized standard of the world.

More than 6,000,000 of them in use.

The "Bell" companies and several thousand independent companies, as well as the United States and most Foreign Governments specify Western Electric Telephones. So should you.

Bulletin No. 50 describes them. Write for a copy.

WESTERN ELECTRIC COMPANY

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| New York, Philadelphia, Boston, Pittsburg, Atlanta. | Chicago, Indianapolis, Cincinnati, Minneapolis. | Write Our Nearest House | Saint Louis, Kansas City, Denver, Dallas, Omaha. | San Francisco, Los Angeles, Seattle, Salt Lake City. |
| MONTREAL, WINNIPEG AND VANCOUVER | ANTWERP | | | |
| Northern Electric and Manufacturing Co., Ltd. | Bell Telephone Manufacturing Co. | | | |
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FOR ALFALFA

This is the implement to use in your alfalfa field. Farmers who have used it say it is the best implement made.

The Naylor Combination Spring and Spike-Tooth Harrow

is ideal for producing a perfect seed bed. The spring teeth stir and cultivate—the spikes pulverize and level. Once over does the work better than two or three times over with other harrows. Spring and spike teeth set at any angle—to work deep or shallow—or raised so barrow can be transported on frame. All-Steel—Strong—Durable.

Write for Free Book and Introductory Offer

Something special for first buyer in each locality. You will want this tool some day—might as well be first as second. Dealers wanted everywhere.

THE NAYLOR MFG. CO., Box 35. LA GRANGE, ILL.

QUALITY COUNTS

The
GREAT
WESTERN
CREAM
SEPARATOR

Not
Sometimes
But
Always

Guarantees
the
Highest Type
of
Up-To-Date
Construction

When You Buy
a cream separator, you should demand an "up-to-date" machine. Don't buy a machine that was "in style" ten years ago—a high tank, exposed gears—plain bearings set in holes cut in cast iron frame are all evidences of a "back number."

THE GREAT WESTERN
is made throughout with the absolute accuracy of a high-grade watch. Skims closest (hot, cold or stale milk) because it follows every law of nature. Equipped fully with imported ball bearings—guaranteeing the lightest-running separator in the world. High crank, so the operator doesn't have to break his back. Self-flushing, self-draining bowl—gears enclosed, which work automatically in a bath of oil. Low down tank—low down and compact frame.

The Great Western carries the strongest guarantee ever issued—it protects you for five full years.
We furthermore guarantee satisfaction to you—any kind of a trial, without one cent of expense to you, or obligation either. Ask your dealer to show you a Great Western, and don't let him work any substitute game on you. It will pay you to buy the best.

Let us show you many other exclusive features—just write us today (if interested) for one of our large FREE Art Catalogue No. 606. Do it right now.

Smith Manufacturing Company
158 East Harrison Street, Chicago, Ill.
Minneapolis, Minn. Omaha, Neb.
Kansas City, Mo. Indianapolis, Ind. Columbus, Ohio

Great Western

Low Wheels Low Lift!

When you load your farm wagon over high wooden wheels it's the last two feet of the lift that hurts. Lifting kills more farmers than pneumonia, consumption and typhoid combined. Cut it out! Get a set of

EMPIRE LOW STEEL WHEELS
for your farm hauling. They cost only half the price of wooden wheels and they save you tire and repair expense, save your team and save you. Write for new illustrated catalog showing Empire Wheels and Empire Handy Wagons.
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to use our **FARMER'S FORGE OUTFIT** on your farm in doing blacksmithing and repairing. We have high endorsements for the thousands of Farmer's Forges sold direct to farmers within the past twelve years in every state and Canada. Our Forges have hearths 24x26 inches, 11 1/2 inch blowers, run easy, and have all the first class qualities of high-priced forges.

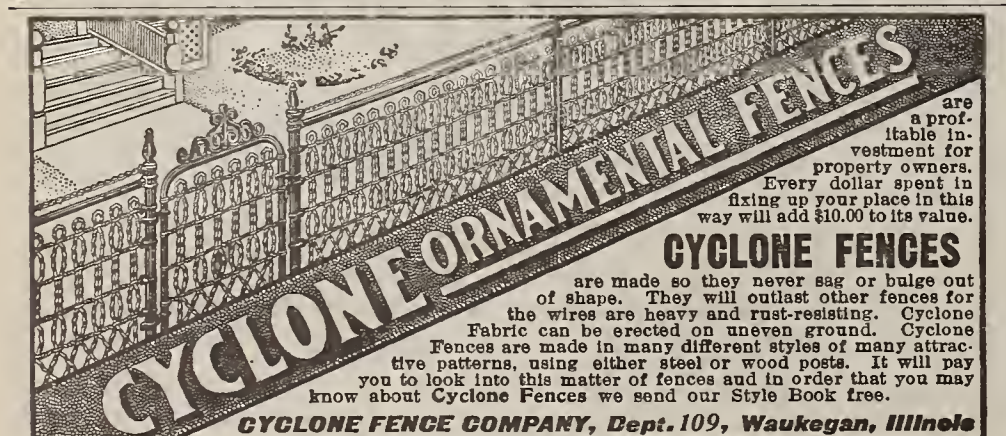
WE POSITIVELY GUARANTEE our Farmer's Forges to be as large, as durable, do as much work and equal in every way any \$10.00 forge on the market, and as represented or money refunded.

SPECIAL WINTER OFFER until March 31, 1910, we offer 1 Farmer's Forge complete \$3.60 or one Farmer's Forge, one anvil and vice combined, and one pair of tongs, all for \$3.40. Ten carloads on hand. Orders shipped promptly. This offer may not appear again. Write to-day. Send stamp for catalogue No. 31 and testimonials.

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SPECIAL PRICE \$3.60
WILL WELD A 4 INCH WAGON TIRE

Lightning Pitless Scales
New Pattern. Solid Channel Steel Frame
Channels are seven inches which is the height of platform from ground. Levers are octagon in shape giving greater strength. Bearing are Toolsteel. This Scale will last a life time with ordinary care. Equipped with compound Beam Free. Furnished absolutely complete except platform planks. Guaranteed accurate and tested to more than its capacity. Write for our prices and description before buying.
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CYCLONE ORNAMENTAL FENCES
are a profitable investment for property owners. Every dollar spent in fixing up your place in this way will add \$10.00 to its value.

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are made so they never sag or bulge out of shape. They will outlast other fences for the wires are heavy and rust-resisting. Cyclone Fabric can be erected on uneven ground. Cyclone Fences are made in many different styles of many attractive patterns, using either steel or wood posts. It will pay you to look into this matter of fences and in order that you may know about Cyclone Fences we send our Style Book free.

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Live Stock and Dairy

Supplementing Scant Hay Rations

IN PAST years hay has been plentiful and cheap, and for this reason the feeder has been content to give his stock a roughage ration consisting entirely of hay. During the past few years the cost of hay, like the cost of other food-stuffs, has increased largely. This naturally raises the question of how less hay can be fed and results the equal or superior obtained.

In this instance as in many others we can learn valuable lessons from studying the methods employed by the live-stock feeders of Europe. Over there lands are invariably high and in many instances to rent an acre of land for a year costs as much as to buy an acre in this country. Hence it is necessary for the rations fed to live stock to be compiled as cheaply and economically as possible.

They raise very little corn and hay and in fact a large portion of the concentrates they feed are bought in this country and shipped at considerable expense across the water. And there the basis of all rations is roots.

A greater tonnage of roots can be raised per acre than of any other crop and labor being cheap a ration of roots costs very little. For dry matter, chaffed straw and a small amount of linseed-meal or cotton-seed cake added is used.

They prize the value of their straw crop much more than we do and at harvest-time they are very careful not to allow the straw to become wet and spoiled. Instead of piling it up, they carefully stack it or place it in the barn.

As a result the straw is very palatable to the animals in the winter and, although it contains very little more nourishment than does corn-stover, still it supplies dry matter to balance the great amount of water found in the roots. Corn-meal, being very expensive, is fed very sparingly.

Handicapped, as it appears to us, as this feeder is, yet we find him getting results that are equal to or even in most cases better than our own. These facts are significant and no doubt can be construed to mean that the present high prices of food-stuffs in this country are a blessing in disguise. There is no disputing the fact that the American feeder is wasteful and that annually there are thousands of bushels of corn and hundreds of tons of hay wasted. And in the case of the corn it is not only wasted, but worse than wasted, because it is consumed by farm animals without being balanced with other foods and is never digested, but taxes the digestion without aiding the animal.

We ought to supplement corn and hay with other foods not only to make the ration more varied and lessen the cost,

but also to make it more efficient in producing results. Judging from the results gained by feeding largely of root crops and by the results invariably gained when feeding on grass, it is quite evident that the American ration could be greatly bettered by the addition of succulent food. Both root crops and silage are good. It is very doubtful, however, if the feeder of this country can afford to raise root crops at present land values and prevailing cost of labor. The comparative cost and value of roots and silage have been determined by the Minnesota Experiment Station. It was found there that the cost of producing and placing in the silo an acre of corn yielding 10.2 tons of silage was \$18.21, and the feeding value per ton was \$1.88 when compared with timothy-hay selling at \$6.00 per ton. The cost included everything from manuring the ground to the rental on the land, the depreciation of the silo and all machinery used in handling the corn. To raise, harvest and store an acre of mangels yielding twenty tons cost \$34.08, and the feeding value of a ton of the roots was found to be \$1.30 as compared with timothy-hay at \$6.00 per ton. The feeding value would of course be far greater when compared with hay at its real value now.

By the use of either roots or corn silage the amount of hay that a cow will eat or require will be reduced at least two thirds and in most cases the milk production will be greatly increased and the condition of the animal bettered. The time has come when there is no longer doubt of the value of the silo on the farm, both in decreasing the cost of the rations and in increasing their efficiency, and the time is close at hand when silos will be as common in the corn belt as corn-cribs are now.

HUGH G. VAN PELT.

Currying—Not Worrying

ONCE in a while you hear some man say, "You will curry more flesh off your cattle than you will curry on." Our natural impulse is to say that he is a lazy man who says that. But it is likely enough that he never has made a thorough test of the comb and brush, using them the right way, kindly and sympathetically.

There is a right and a wrong way to do even this apparently simple job. One may take a comb and brush and go at it as if he were raking them over a cast-iron cow, never giving a thought to the feelings of the animal he is inflicting such punishment on. That it seems like punishment may be seen by the way the poor creature shrinks and tries to escape from the ordeal. There is a wild look in her eyes and she stops eating and attends strictly to the grooming, breathing deep and manifesting every sign of relief when the unfeeling farmer passes on to the next victim.

The other way is to go about the work quietly and carefully, especially if the process is a new one to the herd. The first thing is to get acquainted with the cows so they know one is their friend. By speaking to them gently, by using the brush and comb lightly for a time, the members of the herd will soon get so they enjoy it and will stop eating, not through fear, but because they want to get the most out of the occasion they possibly can.

For a number of years I had been doing this with my cows before I had any idea that the process was a money-saver. I did it particularly because I wanted my cows to look well. It may be I took that from my father. His cows always looked as sleek as moles in winter. I well remember how nice and shiny his oxen were, for we never had a horse on the farm till we boys were young men. To me something of the same sense of enjoyment came from having nice-looking cattle when I had a farm of my own.

But one day I learned of a farmer up in the northern part of the Green Mountain State who said that he had tested the matter and knew that grooming cows saved money in feed. I do not just recall his words, but they were to the effect that he would rather spend an hour a day currying the herd than to have a certain percentage more of feed.

That was a new thought to me, and I began to wonder if it were true. To-day I am firmly convinced that it is. Care is the right-hand helpmate of feed. Why? It keeps the body in condition to assimilate the food given to the best possible advantage. Currying, done properly, keeps the skin in good condition; it stimulates the circulation and frees the body of much dead matter that would otherwise lie from one day's end to another under the hair to irritate and distress the animal.

If all farmers would learn the secret of good care they would add many dollars to their purses every year.

E. L. VINCENT.

Brood Sows for 1910

MR. FARMER, did you know there will be a shortage of brood-sows in 1910? During the last month great numbers of brood-sows have been rushed to market. Were it not for the general shortage of hogs in the country this would not mean much, as at this time of year when there is a general let-go. But isn't it a questionable thing to do now? Wouldn't it be well to look before leaping in this matter?

It is true prices are high and feed is high; but the men that look far ahead are not selling their brood-sows. High prices make men do foolish things sometimes. Quite a number of farmers are not figuring where their next crop of pigs is to come from. We believe it will be hard to buy good brood-sows this spring.

An old and successful hog-raiser says he keeps every good brood-sow which he knows to be a good mother and a prolific one, besides selecting his most promising young ones to replenish the breeding herd. The farmer that keeps over his brood-sows and a few young ones will be finding four-leaf clovers all over the farm this spring.

Give your brood-sows good care and feed, plenty of exercise and good, pure water, and, above all, hold onto them.

C. A. THOMPSON.

Give Nature's Tonics

ACANTON, OHIO, subscriber asks for "the best tonic for a mare that is run down in flesh. She eats feed enough, but does not flesh up as she should, and is also rough in the hair."

The mare needs no drugs. Have her teeth examined, to see if she properly masticates her food and, if necessary, have them filed. Unless the stable is very warm, keep her blanketed. Get some carrots and feed her a few every day. Feed her each morning and night with one quart of corn-meal, two quarts of bran and one pint of molasses, all well mixed together. At noon give her a feed of oats, gaging the quantity by the amount of work she is doing. See that she is watered regularly, has what hay she needs and that she always has a lump of rock salt in her manger. Use her frequently; too much idleness is a bad thing.

What this mare needs is undoubtedly a run at grass and it may be difficult to work much change in her during the winter. But the above treatment ought to help.

DAVID BUFFUM.

Feed for a Shetland

AN AUSTIN, TEXAS, boy writes to us: "I have a little pony, who has always been strong and healthy, to drive to a cart and also to ride. What, and in what quantity, ought I to feed her? I have shelled corn and oats, and bran and Johnson grass hay all handy."

A small pony, especially if a Shetland, does not usually require much grain. A quart of corn in the morning and a quart of oats at noon and at night should be sufficient. Give her what hay she wants, and if the weather is suitable and there is good pasturage, turn her out to grass whenever there is a chance.

These little ponies are natural hay and grass eaters, their native country producing very little grain.

D. B.

To Paste in Your Hat

Take a ten minutes' stroll through the stables just before retiring at night. It will provide you with a most beneficial bit of fresh-air exercise and often may be the means of saving you many dollars by tying up any loose horses or releasing one from some dangerous position. You can probably recall many an accidental loss of yours or your neighbor's that might have been prevented by this plan.

Good winter care is not merely a matter of present-time comfort and profitable production. The cow that remains in prime flesh all winter is ready to do her best from the first moment she is turned on the grass in the spring, while the poorly-fed, run-down cow must waste considerable time and consume quantities of pasturage in recuperating. Indeed, some of these poor, half-starved creatures only regain their full milk-giving powers by the next calving-season—some never do.

M. ALBERTUS COVERDELL.

READ THIS CHALLENGE OFFER

on the ECONOMY CHIEF CREAM SEPARATOR



We believe the Economy Chief is the best and most satisfactory cream separator on the market today, regardless of price. We believe it to be the best in design, the closest skimming, the easiest running, the quickest cleaning; in short, the greatest separator value that money can buy. We have absolute confidence in the Economy Chief and we want every owner of cows to share this confidence with us. We want everyone interested in buying a cream separator to have an opportunity to find out for himself which is the best machine, which is **THE SEPARATOR TO BUY.**

HERE IS OUR CHALLENGE OFFER

Deposit in your local bank the price of the Economy Chief Cream Separator you want to try, or

Send us a letter of reference from your banker stating that you are a reliable person; then

We will ship to you at once, freight prepaid, the separator you order, with the understanding that you are to set it up and try it on your farm for sixty days. Give it the hardest kind of a test; if possible try it alongside some other well known standard make, such as the best dairy farmers are using. Compare our machine in actual operation with any other. Note the amount of cream you get from each. Compare ease of running, time consumed in cleaning, and make any other comparisons you can think of. Never mind about the price; what you want from a cream separator is CREAM. If any other machine selling even as high as \$85.00 or \$90.00 will do better work, will skim closer, will give better satisfaction than our Economy Chief at \$42.50, our advice to you is, buy the other machine and send ours back.

When you have finished your sixty-day test, if you are perfectly satisfied that you have the best separator on the market, write us saying that you want to keep the machine, and we will send you a bill for your separator and the freight charges we paid on it.

If at the end of sixty days you are not satisfied that the Economy Chief is the world's best separator, you don't need to even tell us the reason for your dissatisfaction unless you wish to; just drop us a line saying you don't want the machine. We will then send you a return address card to tack on the box and we will pay you for your time and trouble in making the test, setting up the machine, repacking it and hauling back to the station. You set your own price. We don't want you to lose one penny in trying out the Economy Chief for sixty days.

If you want to send cash with your order, as most of our customers do, you won't lose any of the benefit of the above CHALLENGE OFFER, for if at the end of sixty days you decide you don't want the machine, if you think after a sixty days' trial you can get along just as well without a separator, or if you have seen a separator in operation giving better results than the Economy Chief, just send it back at our expense, tell us how much we owe you for freight charges, hauling from and to the station, setting up and repacking, and we will promptly send you every cent of the purchase price, plus your bill.

This Is Our Challenge Offer and Our Whole Cream Separator Proposition!

FILL OUT THIS SPECIAL ORDER BLANK

☐ CASH WITH ORDER.

If you are enclosing the full price, simply write the amount in this square.

☐ CASH IN BANK.

If you have deposited the purchase price of the separator with your local banker, make an X mark in this square and enclose your certificate of deposit properly made out and signed by your bank.

☐ BANK REFERENCE.

If you prefer not to send us the money, or to hold it in the bank subject to our order, make an X mark in this square and enclose a letter of reference signed by your banker, telling us that you are a responsible property owner.

☐ FREE DAIRY GUIDE.

Nearly everybody has a copy of our big General Catalog or our Cream Separator Catalog, but if you have not and want more information before ordering, make an X mark in this space.

Name _____

Postoffice _____

R. F. D. No. _____ State _____

P. O. Box No. _____ Street and No. _____

Farm & Fireside Please write plainly and carefully.

Note the Reduced Prices for 1910

WE RECOMMEND THE BIG 600-POUND SIZE

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|-----------|---|----------------|
| No. 23T51 | New 1910 Economy Chief. Capacity, 250 to 300 pounds, or 120 to 145 quarts per hour. Price reduced to..... | \$27.90 |
| No. 23T52 | New 1910 Economy Chief. Capacity, 350 to 400 pounds, or 170 to 195 quarts per hour. Price reduced to..... | 33.80 |
| No. 23T54 | New 1910 Economy Chief. Capacity, 600 pounds, or about 290 quarts per hour. Price reduced to..... | 42.50 |

We think our Economy Chief Separator is the best machine in the world. We want to sell you an Economy Chief if you think the same as we do, not otherwise, and we make this challenge offer to give you a chance to find out all about the Economy Chief **at our expense** and to prove our confidence in our own machine.

IF THE MAKER OF ANY OTHER CREAM SEPARATOR IN THE WORLD BELIEVES IN HIS MACHINE AS WE BELIEVE IN OURS, LET HIM MAKE YOU THE SAME PROPOSITION WE DO.

That's all!

SEARS, ROEBUCK AND CO., CHICAGO



ONLY \$91.25

For My High Quality, Guaranteed 4½ H. P. Gasoline Engine

I AM making a specialty of a 4½ H. P. gasoline engine which is best suited for pumping water, grinding feed, sawing wood, shelling corn, operating cream separators, churning and for general farm work.

The Sensation of the Season is the Caldwell Special Gasoline Engine

I challenge the world to produce an engine of equal merit to my **Caldwell Special** that can be bought for the price I offer you my engine. Give me a chance and I will prove to your satisfaction that the **Caldwell Special** is the engine for you to buy, because I can give you better value for your money than any one else. I sell my engine direct from factory and can save you the dealers', jobber's and catalogue house profit. If this money is as good to you as to the other fellow, write me and I will prove to you all that I say.

All I ask is for you to take the engine, try it free for sixty days on your own farm and if you are not fully satisfied with the engine and convinced that I have saved you money, return the engine to me and I will pay freight charges both ways and it will not cost you one single cent to secure the proof I offer.

I have satisfied and saved money for thousands of purchasers and know that I can satisfy and save you from \$25 to \$100 on the price of your engine.

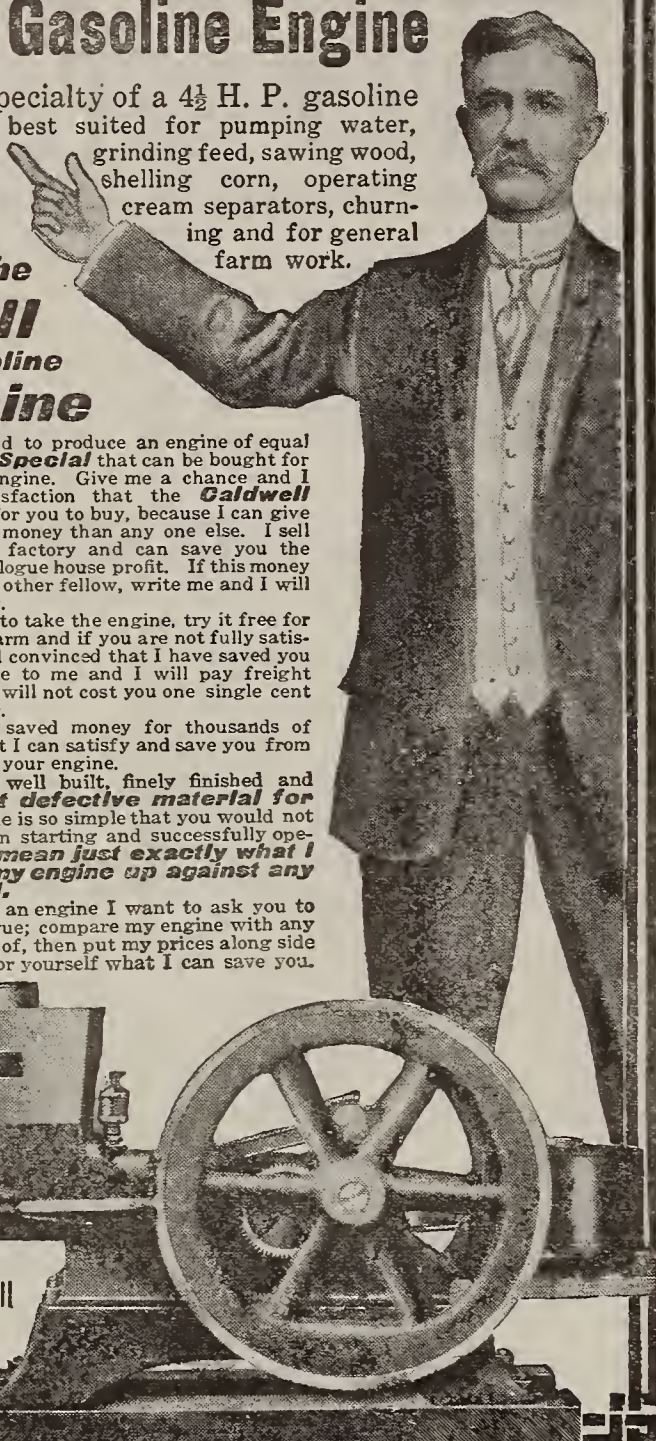
All my engines are well built, finely finished and **guaranteed against defective material for five years.** My engine is so simple that you would not have the least difficulty in starting and successfully operating it at all times. **I mean just exactly what I say and I will put my engine up against any engine in the world.**

If you are going to buy an engine I want to ask you to write for my free catalogue; compare my engine with any or all engines you know of, then put my prices along side those of others and see for yourself what I can save you.

Write
without
fail
for
catalogue
and
price
list.

J. D. Caldwell, Pres.

The Caldwell-Hallowell
Mfg. Co.
525 Commercial St.
Waterloo, Iowa.



Live Stock and Dairy

Poor Cows Worse Than None

THE low average yield of milk and butter per cow in the United States ought to be sufficient proof to farmers that there is great need of improving our dairy stock. Government figures show that the average cow produces only one hundred and forty pounds of butter per year; at that rate, taking the dairy industry as a whole, there is no money made at it. And since many men, those who keep cows above the average, are making it pay, there must of necessity be a great number of cows falling below the average, and not even paying their keep. The dairy products of this country are valued at \$600,000,000 annually. What a pity that all the labor and feed necessary to produce this vast sum is expended without a profit to all concerned.

While it is true that better and more intelligent care and feeding of the present cows would increase the product to some extent, we must look to the breeding and raising of better cows to bring about the desired result. The first point in this process is to weed out all cows that fall below an arbitrary standard by weighing the milk from each cow and using the Babcock tester to learn of the butter-fat.

One reason why the average farmer has non-paying cows is because he has always looked cross-eyed at them, trying to see two in one—that is, a dairy cow and a beef animal, and he has failed to have either one. It is time we learned that in order to profitably conduct a dairy, either large or small, we must have dairy cows, of a breed especially developed for the production of milk and butter; and such cows are not found in the beef type.

It is not necessary or even possible to fill our herds with pure-bred cows at the start. After we have tested out the poor ones, let us buy a sire, the best we can afford, of the dairy breed which best suits our conditions or needs and which we like best. Look specially into the producing records of his mother and grandmothers, for he is more likely to transmit their qualities than his sires'.

Where it is not practical for an individual to own an expensive sire, let a few neighbors agree and go jointly into the laudable effort to improve their herds. At an outlay of from fifty to one hundred dollars a wonderful improvement can, in a few years, be made. Bettered breeding stock often changes the business from one of discouragement to one of profit. Try it. Feed, labor and other costs are not likely to go lower, and our salvation lies in the successful effort to own cows of higher producing capacity.

R. P. KESTER.

The Peril of Little Scratches

A NEW YORK subscriber has a cow which three months ago got a slight scratch under her eye from barbed wire. A swelling of the whole side of her head has been the result.

The scratch, small as it seemed, has become infected and will not heal now until the infection has been freed from the germs that are causing the trouble. Had treatment begun at once the trouble could have been prevented easily by bathing two or three times a day with antiseptic solution which would have kept the wound clean so that it would have healed very rapidly. There should be in every barn a quantity of disinfectant that may be readily mixed with water and used in just such cases of skin wounds. Potassium permanganate is excellent, and can be purchased at any drug-store in powder form and used in water in amounts such as will color the water a light red. It has the advantage over many antiseptics of not irritating the wound. Creolin is very largely used, added to water until it gives a milky appearance. In fact any of the commercial antiseptics will keep the wound free from infection if used early, and the formation of large running sores will thus be prevented.

The best home treatment of old sores is to bathe them two or three times a day with hydrogen peroxide and syringe them out with warm water followed by a small quantity of the same antiseptic. It is rather doubtful whether home treatment will bring a rapid cure to a sore of long standing, and without doubt a competent and reliable veterinarian ought to prescribe treatment after thorough examination.

HUGH G. VAN PELT.

Wet Fleeces Mean Losses

A RUSTFORD, MICHIGAN, man raises a question, important to every raiser of sheep. He asks whether sheep need a regular (warm) barn, or whether a shed that is simply dry will do. A neighbor has advised him that a good wind-break is all that is necessary.

For a small or large flock of sheep a man should have a sheep house or shed and should never allow them to be out in rain or snow storms from, say, October 1st until about May 1st. When sheep in the winter get thoroughly wet with rain or snow, the results often are colds and pneumonia, because at this time there is not sufficient sunshine to dry out their fleeces once they become wet. This sheep-house can be built very economically, as our correspondent says, with a tight roof and sides boarded up to keep out driving snow and rain. Sheep can stand as cold weather in the winter months as we have in this country, but they cannot stand wet in cold weather. This barn or shed should be built to give plenty of light and ventilation, and each breeding ewe should have five to seven square feet of space according to the size and breed of the sheep.

The idea of our correspondent's English neighbor, who thinks sheep can be left out in all storms if they can shelter behind a piece of thick woods, is a poor one. Trees hold the wind back, but they do not keep back the rain or snow. Sheep must be sheltered from the wet. In England, where they have not such severe winter weather as in this country, the plan of leaving sheep in the open would probably be all right; but here all one would gain would be quite a lot of practical knowledge from the loss he would have by following that plan.

FRANK KLEINHENZ.

Goats as Sheep-Guardians

A KENTUCKY sheep-raiser asks whether keeping a billy-goat with the flock will save them from being annoyed by dogs. We have never tried it here, but some years ago when we kept Angora goats I had a four-year-old billy-goat in a paddock and turned two dogs in with him as a test, and he successfully fought them. I believe that it is a practical idea to have a three or four year old billy (an Angora) with the sheep. A younger one I do not think would do so well, as they have not their full growth of horns and have not the same courage to fight as the older ones. I do not believe, however, that one goat would be an absolutely sure protection to a good-sized flock; for one dog hardly ever goes alone to kill sheep, and while the goat perhaps could hold one dog under control at the front, the other one or two may go to the rear of the flock and start killing the sheep there. F. K.

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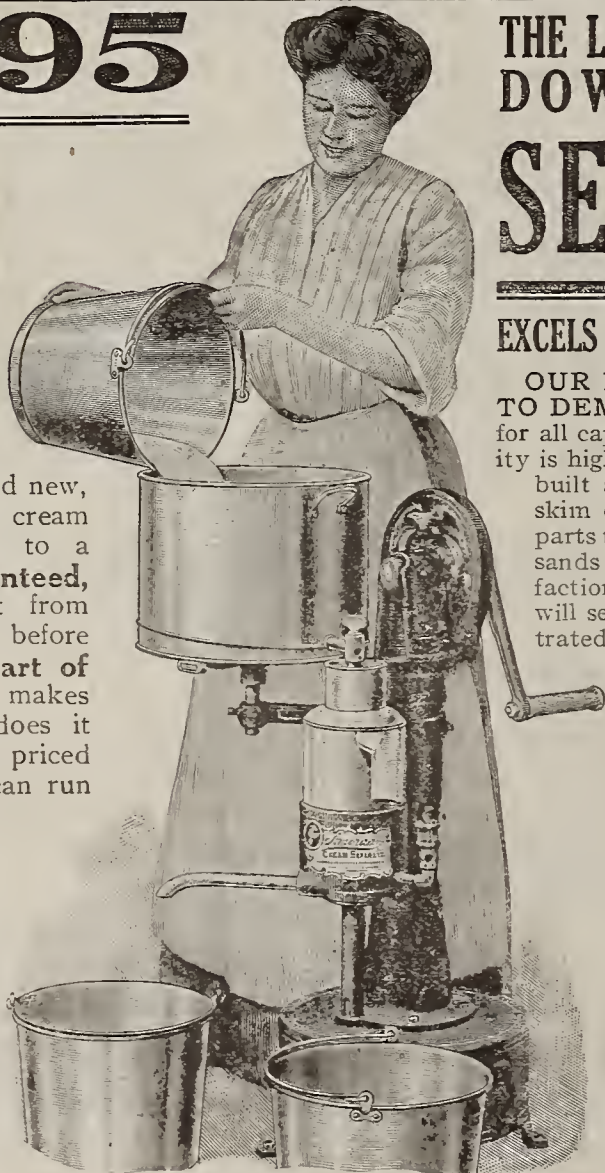
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Let each of us, for instance, look back over our operations of 1909 to determine whether or not we did our share toward making this showing possible.

We all know that there are about 6,000,000 farms in this country. Did 6,000,000 advance, improve, produce more wealth—or did one million, two million, or three million do all of this pushing and improving of methods to make a gain of \$869,000,000 possible?

We ought to stop and think of what has made the gains of former years possible. We must stop to realize that this gain of \$869,000,000 for 1909 is not due to so much more land under cultivation, but has been brought about primarily by better methods of cultivating the same land that has been cultivated before; by better methods of preparing the soil, sowing the grain and harvesting the crops.

Without the wonderful strides made in the development of farm machines, an \$8,760,000,000-crop would be entirely out of the question.

And yet there is room for progress—the rules of 1909 farming are not the rules for 1910. New machines mean new advances and new wealth. Do you keep abreast—are you posted about these things?

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What the right kind of a cream harvester means to you in increased milk and butter profits—and skim-milk calves;

Why a good feed grinder means fatter stock;

How greatly to increase the value of the 1910 hay crop by using the right mower, tedder, baler, etc.;

How to know all about harvesting machines;

How to get the most profitable profits out of the stalks as well as out of the ears by harvesting your corn in the right way—at the right time;

How to know the ear marks of a good wagon.

If any of these will help you in the race, get a copy of our book—"Glimpses of Thriftland." That tells the whole story briefly and in verses that you'll like. Then we have some books that are still more business-like—the I H C Almanac and Encyclopaedia, the Farm Science. Say which you are most interested in. All are free for the asking.

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Live Stock and Dairy

Mutton Sheep for Farm Flocks

THE profits from a well-managed flock of mutton sheep are relatively greater than those from any other kind of live stock. The numerous failures in the keeping of sheep on farms almost always come from having too large a flock to begin with. Any farmer with good judgment can make a small flock pay good profits; but few farmers can keep a thousand sheep with an equal degree of success. This is especially true where one is a beginner at sheep-raising. Of all arts allied to agriculture, there is no branch so difficult to become proficient in as the shepherd's art. Not that there is anything mysterious in the science of breeding, feeding and handling sheep; what it does require is close attention and careful study. It is not wise for any one to plunge into keeping sheep in large numbers until after he has made himself familiar with the business and conducted many experiments on a small scale.

Sheep possess great ability to renovate the soil, keep down all kinds of weeds and to consume odds and ends of feed that would otherwise be wasted; but the man who undertakes to develop a really profitable flock of mutton sheep must cut away, as far as possible, from the idea that they are kept because of their ability as scavengers. He must like his sheep and plan to give them the most painstaking care and the best food that his farm affords.

In starting a flock of mutton sheep there are certain fundamental principles to be considered: First, we must start with a breed that is capable of producing good quality mutton when properly fed and cared for. Second, we must have a variety of feeds of a suitable kind to develop their possibilities. Third, we must have a knowledge of how to feed to secure the desired results.

Some farmers have a mistaken idea that feed is everything and that high-class mutton can be produced by any breed of sheep. Feed is a great point, but breed capabilities is a greater. Some breeds are capable of producing a high quality of wool at a profit, but cannot be considered profitable mutton-producers. The American Merino is one of these breeds; but with all their many excellencies we would no more think of keeping Merino sheep to produce mutton at a profit than we would of keeping Jersey cattle to produce beef at a profit.

Many farmers argue that by selection and the use of improved rams from the best mutton-producing breeds, we could in a short time improve the quality of any flock so that they might be made to answer our purpose. To such men I would suggest that life is too short for us to spend time experimenting with cross-breeding when we can buy choice mutton-bred ewes from some old established flock for from fifteen to twenty-five dollars a head, or a few choice-grade ewes for from six to ten dollars a head. With sheep, it pays to buy the type you want at the very start.

To get lambs that will fatten properly, the ram must come from one of the mutton-producing breeds—Shropshire, Southdown, Oxford, etc. The type of a ram to select depends largely on the size and character of the breeding ewes. If the ewes are small and compact, a ram of larger and rangier type should be selected. If the ewes are coarse and rangy a ram of more compact build is preferred.

The choice between breeds is largely a matter of personal fancy, though it is safest to pick a breed which has already been tried and found adaptable in your section. The special preferences of the trade should also be figured on; some markets, for instance, prefer mutton sheep with dark faces and feet.

Great regard should be paid to the ram's general contour. His structure should be firm and massive, with a broad, capacious breast, no disproportionate length of legs and well-formed and fully-developed quarters, especially the hind quarters. His loin should be stout and well knit, his features bold and masculine. A firm and muscular neck is desirable; a bold and courageous eye and carriage are indicative of spirit and vigor. His head should be long, but rather small and well molded. These appearances mark excellence and prepotency in the rams of every breed.

In the purchase of an animal for breeding purposes he should be regarded as he appears in his normal condition. It is unsafe to rely on the show appearance of a ram.

Every experienced flock-owner knows the value of prepotency or the powers of the male to firmly fix his own character-

istics as well as the characteristics of his breed on his progeny. In selecting a ram, two classes of breeding should be avoided: The common scrub that has no good characteristics to fix and the "pure-bred scrub" without individuality, whose purity of breeding only gives him greater power to work ruin in the flock. Good individuality, backed by several generations of good ancestry, will insure prepotency, with almost unfailing certainty, where the ewes are suitable and the management correct.

In selecting breeding ewes for the mutton flock attention should be directed toward the ones that are able to suckle their young best. Sometimes a ewe that possesses this quality is not a finely-rounded one with the most desirable form; but if she is a good milker, she deserves a place in the flock. My experience has convinced me that the thinnest ewes at weaning-time are often the best mothers.

It will pay any flock-owner to keep a record of the lambs from each of his ewes and be guided more by this record than by the condition of the ewes at the time he is making his selections for next year's breeding. It should be an axiom with every flock-owner to never sell or dispose of an ewe that proves a valuable breeder until she becomes too old to produce superior lambs. There seems to be a general tendency among flock-owners to place too light a value on the breeding qualities of the ewes and to let them go, frequently, in the prime of life.

In selecting breeding stock those with good fleeces ought to have first choice. Mutton form is the main consideration, but the wool crop ought not to be neglected.

The care and food of the flock depends upon a variety of conditions and it would be pure quackery to lay down hard and fast rules. They must be varied to meet the conditions of soil, climate and breed. In general, however, the most suitable pasture crops are fine succulent grasses, rye, Dwarf Essex rape and turnips. The most suitable soiling crops are oats and peas, vetches and the various legumes. The best fodder and grain crops include fine, well-cured alfalfa and clover hay, peas and pea-straw, field roots, corn-silage and oats, wheat-bran and oil-meal, fed in suitable combinations.

Special care should be given the fattening lambs as soon as they are weaned. Abundance of succulent forage supplemented with grain foods that are grown on the farm with the addition of a small amount of wheat-bran and oil-meal will produce the best results. The lambs should go into winter quarters as soon as snow covers the ground. A good, well-lighted shed, without drafts and with doors opening on the sunny side, is adapted to every requirement. Feed-racks can be made to answer the purpose of partitions and divide the lambs into bunches of twenty to forty and the yards constructed so that they can go out and exercise. Yards and sheds should be kept dry and well littered at all times.

Winter rations should consist of fine, well-cured hay, about four pounds of ensilage or roots, with a grain ration approximating the following: Two parts each of wheat-bran, oats, corn and one part oil-meal, divided into two feeds a day.

The prices for prime mutton are usually best in the winter after the cull stuff marketed during the fall is cleaned up; but the price in general stays on a profitable level.

With the present high prices of all grain foods sheep can probably be raised more economically than any other kind of live stock; our farmers are beginning to appreciate this. The small flock, well bred, well fed and intelligently handled will prove a money-maker for the men who are willing to learn the business and stick with their sheep.

W. MILTON KELLY.



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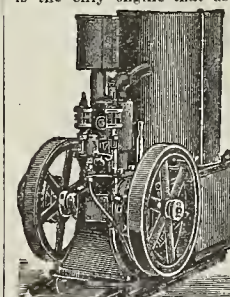
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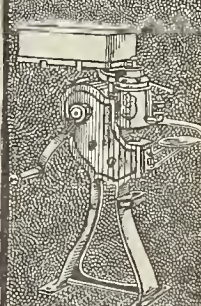
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Poultry-Raising

Hens—Natural and Artificial

THERE is no doubt but that when large hatches are desired, the incubator way is the only way. And then, when thousands and thousands of chicks are to be raised, there is no doubt but that the brooder is the only way. The fact that hundreds of thousands of chickens are so raised successfully every year and come out healthy is a sound argument in the artificial method's favor. If the hen is used to hatch and rear your chicks, she should never be allowed to care for more than twenty, and that is almost too many, outside the hot months; an outside brooder can rear fifty, and some are built for more, but I think fifty ought to be the limit. It takes no more labor to run a brooder for fifty chicks than to care for one old hen with fifteen chicks. When a sudden shower comes up, it is as much work to drive the old hen and chicks under shelter as the fifty. It takes no more time to clean a brooder than it does a brood-coop.

Brooders are too well known to need lengthy description, but a few hints on their care will not be amiss. In buying, one ought to consider their convenience to the operator, as well as comfort for the little chicks. Heat the brooder up a day or two before you want to put the chicks in it. Cover the floor of the nursery with fine sand, then sprinkle in fine hay-seed, cut clover or some other good scratching material. Give the chicks plenty of fresh water in some kind of a fount so they will not run through it and foul it. See that you have small grit in the brooder, unless your chick feed has grit in it; even then a dish of it will help.

Clean your brooder every day if possible and give it a good airing each time. It is necessary, of course, to trim the wick and fill the lamp every day for best results. In regard to the temperature, I have found that you have to make allowances sometimes and use your own judgment. If you have a strong lot of chicks you will find they will require less heat than a hatch not blessed with that stout, rugged appearance. Brooder man-

ufacturers give directions for heating, but in case you see your little fellows crouching and huddling you will be safe in running the heat a little higher than directions call for. At night when you find the little chicks with heads sticking out under the felt of the hover, you may rest content that your heat is pretty nearly right, whether it be ninety degrees or more.

There are many who still believe that chicks raised by the natural method—the hen—will develop much better than brooder-reared chicks, but I have failed to notice a difference. Some fanciers swear by the artificial method, others swear by the natural method. I would say, let the beginner start with the old hen, and then, after he gains experience, he can take a swing with the incubator and brooder.

A. E. VANDERVORT.

Managing Brood-Hens

WHEN a man owns an incubator he gives thorough study and plenty of care to the work of hatching. When he uses natural incubation he is likely to leave everything to the hen. The hen needs special management in the hatching season if she is to do the work right.

First, several weeks before it is the intention to begin setting eggs, a sufficient number of laying hens should be penned in a clean, sunny location, with plenty of scratching-shed room. Then begin feeding these hens with plenty of corn and other fattening feeds, to stop the natural laying propensity. Thus they will become broody much quicker than if left out upon the general range, and may be set upon eggs quite early in the season.

The hatching must be accomplished indoors. Our early-hatched chicks are all brought out under hens, and we always clean up the indoor nest-boxes as soon as the hens become broody, removing all old litter and scalding the boxes out with a kettle of boiling water, then sifting a quantity of ashes into each nest. Upon this we place a heavy matting of old magazine paper or other good absorbent paper, and saturate this matting with kerosene and crude carbolic acid. Upon this matting sift more ashes, and place into each nest-box a sufficient quantity of clean straw. No lice and mites will harbor within such a nest. When the hens get settled on the nest we dust them with insect-powder. The chicks come off much healthier after hatching under such clean surroundings.

These early sitters must have plenty of corn and other warmth-giving food while sitting, in order to keep up plenty of animal heat to meet the weather conditions of this early season. Corn diet with a variation of parings and table-scraps is very conducive to their health and will afford a steady temperature within the body which must be had to successfully bring out strong and rugged chicks from eggs early incubated.

GEO. W. BROWN.

Feather Tips

An egg is largely water. Give the hens all they want every day.

Clean straw in the nest-boxes is like filling the tick new with good clean straw for your own room. How good a fellow can sleep on such a bed!

Mix a little more corn with the other feed as the thermometer goes down. That is like putting more bedclothes on to keep the cold out.

Cracks and broken windows do not furnish the best ventilation. They make drafts, and you know what drafts do to us men folks. First you know you begin to sneeze, then you shiver and then you start for the doctor. Ventilate, don't knock the boards off the side of the house.

I can show you a hen ranch that cost thousands of dollars to fix up; but not a hen roosts there to-night. Why? The place was started by a man who had lots of money and thought it would tickle somebody to see what he could do with hens. Folks were tickled all right; but somehow the hens never tickled the man very much. Disease got in among them, the bills for feed were bigger than the checks for eggs, and finally the man got sick of it and there the place is, empty, proof of a man's folly. What was the matter? The same thing that would be the matter if a farmer should go downtown and start a bank, never having seen the inside of one before in his life. Who could doubt what the result would be? Effect is always on the track of cause. Usually catches up with it, too. E.L.V.

Know My Incubator—Know My PLAN.

My plan is so liberal that you will enjoy dealing with me, and my "QUEEN" incubator is such a good, substantial money maker for your farm that you and I will both be more than satisfied to become poultry friends.



I Pay the Freight.

Just drop me a line, so I can explain my proposition and let you see pictures and letters of my farm friends who use "QUEEN" Incubators. Please do it to-day. I am still including one of my handy Poultry Record Books with my Catalog. It enables you to keep exact figures on hatching and to know how much you are making. I want you to know these facts when you try out a "QUEEN," because it will prove conclusively that you are getting all the poultry profit that can be made.

Pick out from my catalog the size you want and I will just fix you up to your entire satisfaction—make you a low price, a long time guarantee and allow you an extended trial. Write me to-day or you may forget it.

Wickstrum, The Queen Incubator Man,
Box 57, Lincoln, Neb.

Buy the Best First The Cyphers Incubator

SOONER or later, you will own a Cyphers Incubator. Why not start right? Cyphers means big hatches of healthiest chicks—no moisture, heat or ventilation troubles. Used by more Government Experiment Stations, Agricultural Colleges, Fanciers and Practical Poultry-raisers than all other makes combined. Cyphers patented features found in no other.

The World's Standard Hatcher

is guaranteed to you. You have 90 days to prove its superiority. Send for 160-page Free Catalog.

Address Nearest City.

CYPHERS INCUBATOR COMPANY, Department 72.

Buffalo, N. Y.; New York City, N. Y.; Chicago, Ill.; Boston, Mass.; Kansas City, Mo.; Oakland, Cal.



The finest Incubator made

BUY THE BEST

INCUBATOR & BROODER

Absolutely fire-proof, weather-proof, rat-proof. Hot water, double walls, double glass doors, copper tanks, self-regulating, high grade lumber. Only Brooder "Iron-clad" all over. For indoor or outdoor use. Galvanized iron. Sold on "Ironclad" guarantee. Avoid trouble—save time and money. Don't buy—get our catalog first.

American Brooder Co., Box 48, Racine, Wis.

146 Kentucky St. QUINCY, ILL.

Both

12500

Freight Paid

Double cases all over; best copper tank; nursery; self-regulating. Best 140-chick hot-water Brooder, \$4.50. Ordered together, \$11.50. Satisfaction guaranteed. No machines at any price are better. Write for book today or send price and save waiting.

Belle City Incubator Co., Box 100, Racine, Wis.

\$7.55 Buys Best

140-Egg Incubator

Freight Prepaid

80 PAGE POULTRY BOOK FREE

Tells how to succeed with poultry on the ordinary farm. How to make a first-class brooder out of an old piano box. What breeds lay best. Plans for poultry houses, boxes to feed, breed, etc. Describes

PRAIRIE STATE Incubators and Brooders

You will be surprised at the valuable information it contains. It's free. Write a postal for a copy today.

Prairie State Incubator Co., 415 Main St., Homer City, Pa.

How to Get Big Incubator Yields

We want to send you, absolutely free, a copy of our famous "Reliable" Book on incubator yields. Tells all about eggs, poultry and incubators—the "Reliable" Incubators especially. Over 100 different subjects indexed. Our 28 years' incubator experience and this book should help you choose an incubator. Write for it. It's free.

Reliable Incubator & Brooder Co., Box D41 Quincy, Ill.

Send Us a Postal for a Price

Just your name and address on a postal brings prices on all sizes of celebrated

Racine Incubators and Brooders—guaranteed to hatch highest percentage of eggs. Liberal Trial Plan. Best Incubator Proposition on the market. Postal brings all printed matter and prices at once. Address

Racine Hatcher Company

Box 96, Racine, Wis.

Asbestos and Metal Covered

Build Your Own Incubators and Brooders

Anyone can do it. I furnish the mechanical parts and teach you how to do the work. Over 30,000 in use. Big book of plans and supply catalogue FREE.

Henry M. Sheer, Box A18, Quincy, Illinois.

MAKE HENS LAY

more eggs; larger, more vigorous chicks; heavier fowls, by feeding cut bone.

MANN'S LATEST MODEL BONE CUTTER

cuts fast, easy, fine; never clogs.

10 Days' Free Trial. No money in advance. Book free.

F. W. MANN CO., Box 32 MILFORD, MASS.

FOY'S BIG BOOK, MONEY IN POULTRY

And Squabs. Tells how to start in small and grow big. Describes largest pure-bred Poultry Farm in the world and gives a great mass of useful information about poultry. Lowest prices on fowls, eggs, incubators and brooders. Mailed for 4c. F. Foy, Box 10, Des Moines, Iowa

I Want to Tell You About My 1910

Old Trusty Incubator

Johnson Pays the Freight
(East of the Rockies)

40, 60 or 90 Days' Trial

80% or Better Hatches Guaranteed
5-Year Guarantee

Other Incubator Chaps may not like my whole-page advertisements, and I even suspicion that they don't like my OLD TRUSTY Incubator, but you know it's mighty hard to please them and my own customers at the same time. Years ago, "before I knew better," I advertised in most everything from an almanac to an encyclopedia with small advertisements. Now, I prefer to use bigger space and confine it to a few of the very best publications. While the old way was a broad-cast, fine-shot, expensive proposition, I now spend less money and get better results. Now you have it.

When I Made only 500 Incubators annually, I had to make 100% profit. As I made more and more of them I could get along with less profit. Now, since I have passed the 50,000 mark, I have it down to 8% profit. To explain to you how I can work on such a close margin as 8%, let me say to you that my incidental expenses were nearly the same when I made 5,000 incubators annually as now, when I make over 50,000 annually.

When I Made 5,000 Annually, I had to have the same number of foremen and under-foremen as now; had to operate about the same number of steam boilers, engines and machines. My office expenses and advertising expenses were about the same. My insurance and other incidental expenses were also about the same. If I were selling incubators at the same price when I made 5,000 as I do now, I would have went to the wall. I had to make a big profit then, and did make a big profit; but, today, I am working on a very small profit, and yet I make money.

Making Over 50,000 Annually. Clay Center, Nebraska, is a small town; 1,500 population. I own my factory and all equipment. I have 10 acres of factory and office grounds that cost me less money than a single lot in a city would cost. I have my own electric light and heating plants; I have no rents to pay and my taxes are moderate; I am not a corporation; I do not have to make dividends on watered stock—no figure-head officers on big salaries.

From the reasons above enumerated, you can see how I can make the very best incubator at a low price.

I WANT to tell you about my own 8% profit and my 80% better hatches guaranteed to you. It will take this whole page to do it, but I was never much of a hand to half do a job, whether making incubators, writing catalogs, poultry lectures, or saying it in an advertisement.

The heating system in the OLD TRUSTY Incubator is made of pure sheet copper; the case is made of the finest California Redwood, it is covered with pure sheet asbestos and again covered with handsome sheet metal; even the legs are made of angle heavy metal; not a particle of wood exposed, absolutely safe under all conditions and circumstances. The direct-acting, automatic heat governor (regulator) on the OLD TRUSTY is my own invention and my own patent. There are many imitations, but they are just imitations. I attach, connect and adjust the regulator and ship the incubator ready for business—each and every incubator tested before shipping.

I put the OLD TRUSTY Incubator on the market seven years ago. Everyone of them are in good condition today. Not a dollar's expense for repairs—they are as good as new. The guarantee was then for 5 years. On my 1910 Model, I am making a 10-year guarantee.

Among 50,000 Customers, my 1909 metal-covered incubator averaged above 80% or better hatches. For my 1910 Model, I am guaranteeing it—it is making good even now in the winter time. It is simple and sensible in construction. When guaranteeing results, I do not ask how much experience you have had, because previous experience is not necessary—it does the same good work for the novice or expert.

I have a lot of customers among the subscribers of this paper. The OLD TRUSTY family has 150,000 members. I want to reach the 200,000 mark this year. Am making prices to assure it. Mention this paper when you write.

The OLD TRUSTY Incubator Catalog. I call it a catalog and it is a catalog; but, if you don't call it a better poultry book than others that are called poultry books and sold for a price, I will refund your postage and pay you for your bother. Then, I have found out some things about poultry-raising in 35 years' experience that I put into my annual poultry lectures for my customers. I don't quit customers as soon as I get their money; instead, I keep in touch with them, year after year. If what I have learned and do hear as I go along will help them any, they get it through my lectures. Just send to

M. M. Johnson
Clay Center
Neb.

THE FARMERS MAIL AND BREEZE, TOPEKA, KANSAS.

Incubator Contest Awards.

FIRST TO KANSAS.

FIRST PRIZE, cash price of her incubator to Mrs. H. M. Perry, Ames, Kan. Set 110 eggs May 6; tested out 1, May 16; hatched 109 live chicks May 26. Per cent, 99 1-11.

SECOND PRIZE, 42-piece dinner set, to Mrs. Eugene Pacetti, Brandon, Fla. Set 90 eggs April 14; tested out, none; hatched 89 live chicks May 6. Per cent, 98 8-9.

THIRD PRIZE, pair of Nottingham curtains, to F. M. Sizemore, R. R. 1, Steward, Ill. Set 150 eggs March 20; tested out 30; hatched 147 live chicks. Per cent, 98.

PERHAPS the biggest hatching contest with incubators that ever happened was the one in which the poultry raisers of Farmers Mail and Breeze took part from January 1 to May 30 of this year. There were about 800 participants. It was one of the most successful poultry contests of which we have heard and its lessons and results will be of far reaching benefit to the participants and others.



MRS. H. M. PERRY, Ames, Kan., winner of first prize in the Mail and Breeze Incubator Contest.

bringing off a hatch of 109 chicks from a setting of 110 eggs. Mrs. Eugene Pacetti made a percentage of 98 8-9 with a hatch of 89, from a setting of 90 eggs. F. M. Sizemore, an Illinois contestant, wins third prize with a percentage of 98, hatching 147 out of 150 eggs. These were nearly perfect hatches. Percentages were carefully worked out for all reports and the prize winners made affidavits to their reports, so there was a fair field and no favors for the contestants.

Mrs. Perry's Methods. Mrs. Perry, winner of first prize, was asked to describe her method of managing her incubator. She writes:

I set my incubator in the cellar and turned the eggs once every day, twice every other day, and aired them from 10 to 20 minutes till the 18th day. I keep the heat from 102 to 103 till the 30th day. After the 10th day from 103 to 104. After the 18th day we open the incubator only when we have to watch the thermometer and to remove the chicks. MRS. H. M. PERRY. R. R. 1, Ames, Kan.

corn, good, broomcorn and cotton doing only fairly well. Wheat and oats than expected, some into mud.

The Farmers' Mail and Breeze, published at Topeka, Kas., is one of the biggest and most reliable farm papers in the West. 125,000 subscribers in the richest agricultural section of the Southwest. The accompanying clipping was taken from their November 21, 1909, issue. I tore the clipping out and had this cut made from it.

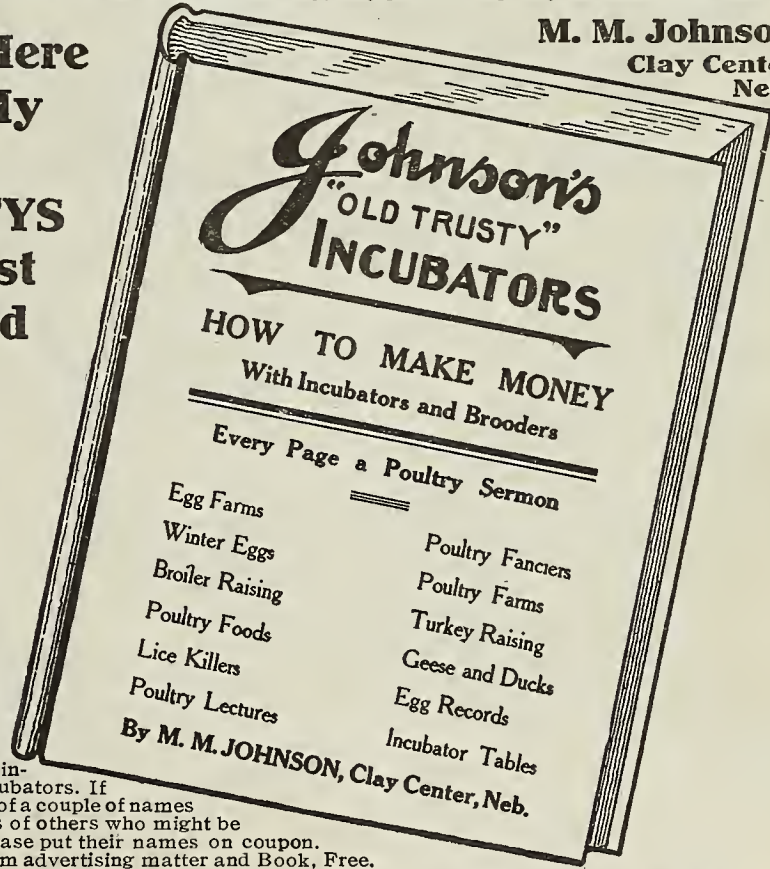
There must have been every known make of incubator in the contest, some costing twice as much as the OLD TRUSTY Incubator, yet when the final check-up was made the OLD TRUSTY won first, second and third premiums—won all the premiums in a contest of 800.

The Farmers' Mail and Breeze did not know or care about the make of incubator, and I did not know such a contest was on. After it was all over my attention was called to it, and I looked the names of the winners up on my order books and found that all three were my customers. I wrote each of them and found that they had won with the metal-covered OLD TRUSTY.

The OLD TRUSTY has been winning contests with other incubators all over the country. Every mail brings good news; but, on account of the great number in the Farmers' Mail and Breeze contest, I am particularly proud of this one instance. I am particularly proud for another reason. This contest was among the farmers and their wives—the people who raise 90 per cent of the poultry in this country. M. M. JOHNSON.

The above book is free to all that are interested in incubators. If you can think of a couple of names and addresses of others who might be interested, please put their names on coupon. I will send them advertising matter and Book, Free.

Read Here How My OLD TRUSTYS Won 1st 2nd and 3rd Prizes



Tear This Out and Mail To Johnson Today

M. M. Johnson, Clay Center, Neb.

Here's my name and two friends. Send along your Old Trusty Book and Prices—Free.

My name.....

My address.....

1st Neighbor's name.....

Address.....

2nd Neighbor's name.....

Address.....

Catalog Free

HERO CORN GRADER INSURES A Perfect Crop

The kernels of corn which you seed this spring must be perfect, well filled out, with large germs and high feed value. They must be uniform in size to insure even dropping by your planter—just so many kernels to each hill.

The HERO CORN GRADER automatically sorts out all poor kernels and separates the good kernels according to size. Will handle any size and kind of corn. Result 95 per cent perfect.

SENT ON 30 DAYS' FREE TRIAL



Send for free book thoroughly covering the subject of seed corn and fully describing this wonderful Corn Grader.

C. A. PAULSON
2845 Colfax Av. S.
MINNEAPOLIS, MINN

Sam Thompson Says Try My New Fairfield Incubator 2 Hatches FREE



I'LL SHIP IT for you to try in your own home, two hatches free. I just want to prove to you at my own risk that the Fairfield is the world's best hatchery. That's what I call it. Thousands of my satisfied customers back me up in this strong claim. There is no better machine at any price. It's built right and will give you the biggest hatches and healthiest and strongest chicks.

Get My New Catalog and My Special Free Trial Offer Now

THE FAIRFIELD is made out of the best California Redwood lumber. It's patented heat system gives an even uniform temperature, which means big hatches. The regulator works perfectly. Big, roomy nursery and egg chamber, double doors. Clear top, fine finish. Write me today without fail for my new catalog and great offer. **Sam Thompson, Pres., Nebraska Incubator Co., 504 Main St., Fairfield, Neb.**

SHIPPED
FREIGHT
PREPAID

At Last, the
Perfect
Incubator



100 EGG INCUBATOR \$7.00
100 Chick Outdoor Brooder 5.00
BOTH, FREIGHT PAID \$10.00

The Advance—Took 20 years to perfect. Thousands now making money with \$10 outfit, raising for market—breeding, selling. Copper tanks, double doors, self-regulating lamp and thermometer complete. Its equal for the money does not exist. Order direct, or full description free for postal.

ADVANCE MFG. CO.
Box 35, Dayton, Ohio.

125 Egg Incubator \$10 and Brooder For

If ordered together we send both for \$10. Freight paid east of Rockies. Hot water, copper tanks, double doors, double glass doors. Free catalog describes them.

Wisconsin Incubator Co., Box 79, Racine, Wis.

RAYO INCUBATOR

SAVES Money, Labor, Oil.

NOTE: 1st—Double heating system gives equal radiation. 2nd—Turn eggs without removing tray. 3rd—One filling of oil tank for entire hatch. 70 day trial guarantee. If not as represented return and money refunded. Freight prepaid. Write for Free Book.

THE RAYO INCUBATOR CO., Hall St., Blair, Neb.

SHOEMAKER'S POULTRY BOOK

and Almanac for 1910 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c.

C. C. SHOEMAKER, Box 725, Freeport, Ill.

GREIDER'S FINE CATALOGUE

of pure bred poultry, for 1910, 200 pages, handsomely illustrated, 150 engravings, photos, 30 fine colored plates, describes 63 leading varieties of land and water fowls, gives low prices of stock, eggs, incubators, poultry supplies, etc. Calendar for each month. How to care for poultry and all details. Only 10 cents. Send to-day.

B. H. GREIDER, Box 62, Rheims, Pa.

Best Birds, Best Eggs, Lowest Prices

All leading varieties pure bred Chickens, Ducks, Geese and Turkeys. Largest Poultry Farm in the world. Fowls, Eggs and incubators at lowest prices. Send for big book, "Poultry for Profit." Tells how to raise Poultry and run incubators successfully. Send 10c for postage.

J. W. MILLER CO., Box 203, Freeport, Ill.

48 BREEDS Fine pure bred chickens, Northern raised, hardy and very beautiful. Fowls, eggs and incubators at low prices. America's greatest poultry farm. Send 4 cts. for fine 80-page 16th Annual Poultry Book.

R. F. NEUBERT, Box 837, Mankato, Minn.

50 BREEDS Fine, pure-bred Chickens, Ducks, Geese and Turkeys. Send 4 cents for descriptive Catalog.

W. A. WEBER, Box 941, Mankato, Minn.

Poultry-Raising

Cull, and Cull Again

THE breeding season is near, and all who expect to make any improvement on their poultry over last year must now finish the culling of the flock. But you say you sorted them over closely last fall. A new weeding-out will be just as important now or before the eggs are saved for hatching. Some of the birds which passed examination before have not made the development expected, and some have lost vigor in a way that disqualifies them for breeding. I have found it just about impossible to select fifty, or even twenty-five, birds in October and find every individual in perfect form and health four months later.

Use only the fully-developed, robust and hardy specimens for breeding. It is surprising how quickly a good flock will degenerate if careful culling does not precede every breeding season.

Five years ago I sold fifteen Rhode Island Reds. The hens were well bred, great layers and had the vitality. The buyer laid plans to build up from these and put his poultry on a paying basis. The following year I noted that he had a promising lot of youngsters on the way. From that time I had not seen the flock, until recently, when I went there to get a cockerel for breeding purposes, and found on the farm about one hundred and thirty Reds. To my surprise, there was not a bird in the outfit that I would accept as a gift for a breeder. This man has completely ignored the rules of selection by breeding from weak, deformed, diseased, stunted and undeveloped birds until he was down and out in the hen business.

Twenty or twenty-five well-cared-for hens should produce all the eggs for hatching ordinarily required on the farm, and on every farm, not later than February, these breeders should be selected and penned by themselves.

V. M. COUCH.

Cheaper to Breed Than Buy

THE owner of a mixed flock ought to put as much care into the selection of his breeding-pen as the raiser of pure-breds does. Many farmers and farmers' wives would like to better their stock, both for profit and their own satisfaction, but they do not want to put money in fancy birds. They can make an astonishing amount of improvement by simply putting a little time and care into the business of selection.

To begin with, cull the flock carefully. Look at the rear first for signs of straining about the vent and bagging down, as with too much fat, and reject all such birds, as also any that have crooked breast-bones. Choose birds with long breast-bones and deep breasts, as along the keel is where the best meat lies and in a general-purpose flock provision must be made for this. Choose birds with bright, round, alert eyes—the quick-moving ones, the birds that are always first at the feed-bucket. Reject long-beaked, snake-headed birds, the ones with dull eyes and those that sit on the roost through the day. When the flock has been culled as above suggested, cull again, choosing six to eight of the best birds of a uniform type for a breeding-pen. Take the best of the old male birds of the same general type to mate with these and sell all the other males.

A breeding-pen necessitates a separate house and run, but the house may be a dry-goods box; and if a run is out of the question for lack of means to inclose it, give the breeders and the laying hens range on alternate days, or for a time give the breeders only free range. Many fine birds have lost their usefulness as breeders because of too close confinement.

If from all the hens there are but one or two from which you care to breed, furnish these with a house and yard, and put the male with them for a few hours only each day. If the male is put with the hens early in the morning, the progeny will be mostly males; if he is put in the afternoon or toward evening the progeny will be mostly females. Also, the mating of a cockerel with hens produces pullets and of pullets with cock birds produces cockerels. Small breeding-pens give excellent opportunities for experiment, and if a note-book is kept, the record of such matings makes most interesting and valuable reading.

Whatever else is done, look for vigor and constitution in the birds. A hen that does not have a good constitution will never be a good egg-producer; a male without a good constitution will never breed egg-producers. Some breed-

ers of pure-breds sacrifice constitution to beauty of feather, fancy lacing—pure silvery white, rich deep buff, etc.—but in the long run they lose by it.

O. F. TAYLOR.

Some of our scientific friends are likely to take issue with Mr. Taylor's observations on the determination of sex in chicks according to time of mating. Perhaps other poultry-breeders have kept record of this matter and can give us something further on it. EDITOR.

Stay With Your Winners

MANY of the poultrymen and poultrywomen who showed stock at the Mid-West Poultry and Pet Stock Show held in Chicago in December made it pay to stay around their coops. There were others who had a splendid showing and won prizes who lost sales by being continually absent.

A Chicago attorney who owns a farm had determined to invest liberally in hatchings. In one of the aisles he saw a fine exhibit of buff Wyandottes and looked around to find some one who had charge of the stock. A friend happened to notice the earnest look on the face of the stranger and hunted up the owner of the display just in the nick of time to close a good contract.

An exhibitor who won the championship on a fine white cock posted a big placard over his champion when the award was made and then left the entire exhibit to itself. Hundreds of visitors, many of them prospective buyers, crowded around the coop. No one but the owner of competing fowls of the same breed was there to answer questions that only the breeder was fitted to answer. The other man soon found an opportunity to explain why the judges had erred in making the decision. There isn't a particle of doubt that the owner of that grand bird lost sale after sale by not being present to take advantage of the enthusiasm that was created by a close examination of the qualities that had won the prize.

A woman had a fine exhibit—a cock and five hens in a big wire cage. About the first thing she did after the show opened was to hunt up a chair and place it close to her display. She left that chair only for her meals, and missed several of them, and talked chicken and took orders all the time. An Indiana man was accompanied to the show by his wife, and they took turn about at standing by their exhibit constantly, save at night when the show was closed. The time they put in paid big profits.

There is immense interest in poultry. The newspapers and magazines, the "boiler-plate" pages of the country papers, are filled with matter concerning chickens. People are moving from cities to suburbs to get room to raise good-sized flocks. Scores of people are determined to make a venture into the business, even if they do fetch up against an epidemic of the gapes or other dread chick malady. The poultry shows are the ideal places to turn that interest to profit.

Too many poultrymen forget that the profit of an exhibit is not all in the prizes, or even in the advertising; poultry shows ought to be poultry markets.

J. L. GRAFF.

Trinidad Lake Asphalt

is the greatest weather-resister known. It makes roofing last. We use it to make Genasco—and we own the Lake.

If you want your roof insured against leaks, damages, and repairs get

Genasco Ready Roofing

Mineral and smooth surface. Look for the trade-mark. Insist on the roofing with the thirty-two-million-dollar guarantee. Write for samples and the Good Roof Guide Book.

THE BARBER ASPHALT PAVING COMPANY



Largest producers of asphalt and largest manufacturers of ready roofing in the world.

PHILADELPHIA

New York

San Francisco Chicago

The City Man Says

eggs cost more each year. This is true, yet thousands and thousands of city folk keep poultry to produce the family supply. The raising of poultry and the production of eggs increases each year. The demand grows faster than the production. Result—

THE PRICE GOES UP

The poultry industry has greater possibilities than ever before and it's profitable on either small or large scale. Geo. H. Lee has been a poultry raiser for 25 years and invented appliances he couldn't buy. The same mechanical means that be perfected are used by successful poultrymen everywhere. Lee's "Chicken Talk" is a book written by him. Valuable. Free copy, and 1910 Incubator, Brooder and Poultry Supply Catalog mailed postpaid. Ask for it to-day.

Geo. H. Lee Co., 1127 Harney St., Omaha, Neb.

One Week More

You can subscribe to FARM AND FIRESIDE for one week more at the old low prices. Your order must be mailed within one week of your receipt of this paper. A picture without cost if you order at once. See announcement on page 25.



DITTO FEED GRINDER

An honest mill sold in an honest way. Try it. Keep it if satisfied, if not, send it back at my expense. No money down. I trust you. The fastest and best grinder made. A few bushels of corn buys it. It saves twice its cost every year. Get my free catalog.

G. M. DITTO, BOX 79, JOLIET, ILLINOIS

THE LARGEST AND BEST LINE OF WELL DRILLING

MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 15. Send for it now. It is FREE.

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We Save You 50% on Building Material

Write for Grand Free Catalog of 5000 Building Material Bargains

Send today for Grand Free Millwork Catalog of all material needed to build, remodel or repair houses, barns and all classes of buildings. Over 5,000 items in building material described, illustrated and offered at half the price charged by your local dealers. Everything in the latest styles, approved by best architects. Made in America's Model Millwork Plant, the largest in the world.

Doors, Windows, Mouldings, Stairs, Porches, Etc., Direct to You at HALF Regular Prices! Quality, Safe Delivery and Satisfaction Guaranteed!

We do a business of over a million dollars a year. Our enormous reserve stock insures prompt shipment, no matter how large the order. We sell for cash and guarantee to refund money if material is not found absolutely satisfactory. Send list of material needed, for FREE ESTIMATE. Write for Free Catalog and full information today.

Gordon-Van Tine Co., 1886 Case St., Davenport, Ia.

Plan Book FREE

44 Complete Plans for beautiful, practical houses, cottages, bungalows, etc. Send 10c for postage & mailing.



Front Door, \$4.50



Stair Newel, Price \$2.86



Art Window, \$3.75



Oak Beamed Ceiling, 13c per ft.



Oak Flooring, 100 lineal feet, 80c



Mantel, \$24.75

Farm Notes

Trapping the Mink

SINCE the time of Daniel Boone and before, there has been a fascination about trapping. Every boy wants to learn the art of snaring game even if it is no more than to catch a bird or rabbit. The mink is probably the most valuable fur-bearing animal that is still common. The furs are bringing from two to five dollars each, and half a dozen mink would keep a boy in spending-money for quite a while. Then again it is devoutly execrated by the farmer and poultry-raiser owing to its habit of visiting the hen-roost, where it plays havoc. Taken all together it is very desirable to make a good catch of mink in winter.

The mink is found throughout the West and middle West as well as far north along woodland streams, and may also be found on the prairie, especially in sandy soil. It feeds chiefly on birds, rabbits and domestic fowls. It seems almost incredible, but a mink can easily wind a rabbit and catch it when there is snow on the ground. All this suggests the kind of bait to use, and I have found bird bait excellent. Holes in the bank of



The Fur Trader in His Lair

Behind him are some of the tapering stretching-boards—described below

the creek and hollow logs are the places to set the trap. Along rocky bluffs where there are cavities large enough for a mink to squeeze through, you will find him poking his nose in search of game. A very good plan is to dig a hole back in the bank, say two feet, and three inches in diameter, set the trap at the opening and cover with chicken or bird feathers, putting the bait back in the hole so the mink will have to pass over the trap before reaching it. Cavities around the root of trees are good places for the trap with fresh feathers for cover when possible. Any hollow log near or across a stream is a fine place to set, and if you do not get the mink perhaps it will be a coon. As a "medicine" bait nothing is better than four parts each of honey and sweet-oil and one part of oil of anise. Another bait likewise good for coons is fish-oil made by the decomposition process. Cut up pieces of fish or eel into a bottle which should be left in the sunshine loosely corked for two weeks, when the oil should be strained off. This has a rank odor and will attract the animals for a great distance.

Along the bank of a pond will be found good places to set in the water. If possible select a place where there is a stump or log a few feet from the bank, and drive a stake near it to fasten the chain to, having chain under water. Set the trap in about three inches of water, then put some of the "medicine" on the log so that the animal will have to pass over the trap.

Never use the bare hands to set, make as few tracks as possible and, when you can, throw water over them when leaving. When you find a mink-den, well-concealed traps will usually get him when he comes out. I like the web steel trap which prevents the animals from amputating its own leg and escaping.

Mink-skins should be taken off whole by slitting the hind legs from foot to foot and drawing the skin off over the body. For stretching use a board slightly wider at one end than the other; pull the skin over the board, flesh side out, till it is tight, then dry in the shade in open air.

H. F. GRINSTEAD.

Renewing Old Pastures

PASTURES of years' standing become mossy and foul, different persistent weeds and joint-rooted grasses creep in and before one is aware of it his pastures are giving only one fourth to one half the amount of grass they should.

Some of our neighbors are determined to renew their pastures, and we are anxious to see the results as we have some pasture ourselves which needs renewing.

Some of the pastures in question are quite rolling, so much so that it is naturally risky to plow them; however, their owners believe with a short rotation the grass-roots will hold sufficiently to prevent washing, and I am inclined to think so myself. Ground that is well supplied with humus usually will not wash badly.

All seem to agree that February or March breaking is best. Some will sow to oats, timothy and clover, and cut the oats, others will hog or pasture the oats; while still others are going to plant to corn, apply a complete fertilizer at the rate of about one hundred pounds per acre, sow to wheat with another one hundred pounds per acre, then seed to clover and timothy, adding some blue grass, probably cut a hay crop, then pasture moderately and get back to the regenerated pasture.

The commercial fertilizers should be a great help, the crops should well pay for fertilizer, labor and all other expense, and the pasture should be in much better shape. We are inclined to think, barring washing, the results will be fully satisfactory.

OMER R. ABRAHAM.

Destroying Skunk Odor

DURING these winter days there is much trapping, especially with the price of skins where it is now. No doubt many skunks will be caught, and he who handles them will certainly be perfumed abundantly. Here is a method I have heard recommended for removing this odor from the clothing without burying it. One mother says her boys trap skunks continuously and go to school every day without the scent upon their clothes. She says, "Make a little fire with hemlock, enough to make a good smoke. Stand over this to smoke the odor out of the clothing. Afterward put a few drops of birch-oil on the clothes."

W. D. NEALE.

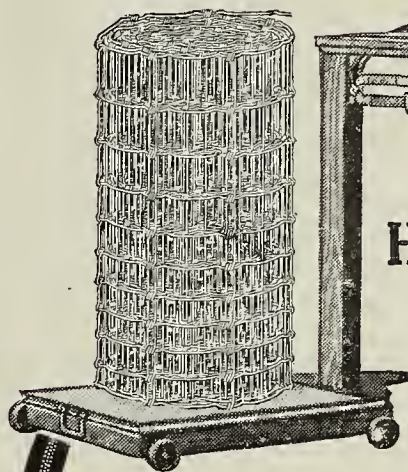
The Norway Poplar

MUCH interest centers at present around the introduction of one of the improved cottonwoods, which is known as Norway poplar. This is a rapid-growing tree that makes fairly good box lumber. It has only recently been put on the market, but there are groves of it in the Northwest ten and fifteen years old. It seems to be freer from leaf rust than our ordinary cottonwood and of more rapid growth. It is also free from the cotton so common in cottonwood groves. This, like the Carolina poplar, is a form of the cottonwood that has been returned to us from Europe.

SAMUEL B. GREEN.

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Made of Hard,
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Heavy Fence Means Long Life

Put the fence you buy on the scales. Any American Fence dealer will be glad to do this for you because he is proud of

the amount of steel he can give for the money.

American Fence is a heavy fence. The gauge of the wire is larger. Compare with any other fence. The eye is easily deceived on the size of the wire, so put the roll on the scales and weigh it. This test will convince you that the fence you thought was cheap is most expensive when pounds of steel are considered. Weight in fence means strength and durability, and our years of experience have taught us that the heavier the fence the better. No argument for light fences can dispute this.

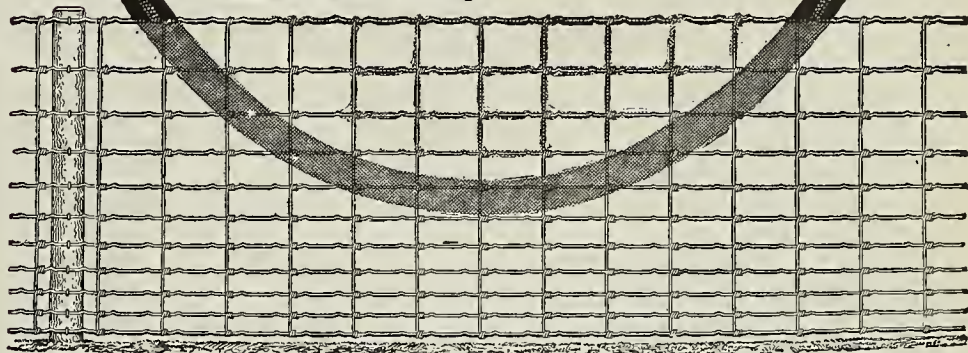
American Fence is made of hard, stiff steel. It is made of a quality of wire drawn expressly for woven-wire-fence purposes by the largest manufacturers of wire in the world. Galvanized by latest improved processes, the best that the skill and experience of years has taught. Built on the elastic hinged-joint (patented) principle, which effectually protects the stay or upright wires from breaking under hard usage.

F. BAACKES, Vice-Pres. & Gen. Sales Agent

American Steel & Wire Co.

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NOTE.—Dealers everywhere. See the one in your town and have him show you the different designs and give prices. Also get from him booklet entitled "HOW TO BUILD A CHEAP CONCRETE FENCE POST," furnished free for the asking.



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Concrete construction is simple and easy to do successfully. Any farmer—with his hired man—can build a poultry-house, or a flight of cellar-stairs, or a house foundation, or any other farm structure. In the course of a year or two you can add greatly to the value of your farm property by putting in concrete improvements.

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There is only one quality of ATLAS cement manufactured, the best that can be made and the same for everybody. ATLAS Cement is made of genuine Portland Cement Rock and contains no furnace slag.

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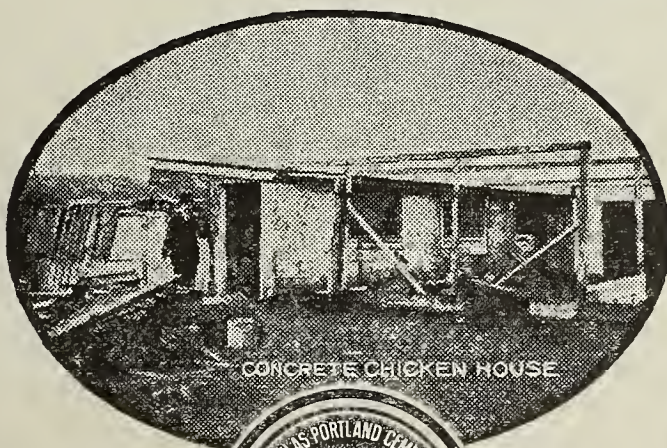
Send for our Free Cement Book

"Concrete Construction About the Home and on the Farm." It is full of directions, illustrations and specifications that will aid you in building large or small concrete structures. Write for it today. It contains 168 pages and over 150 illustrations.

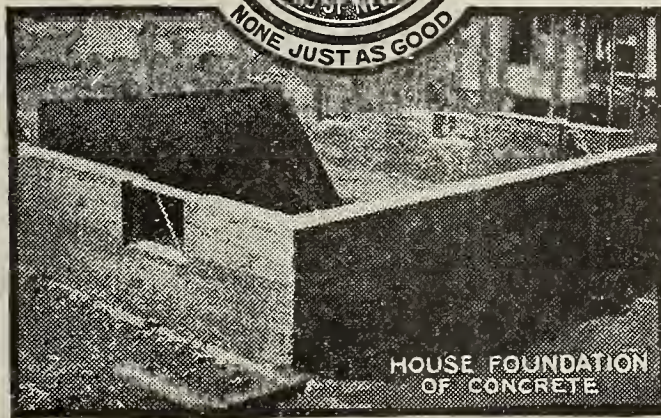
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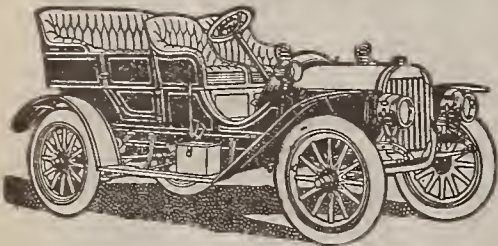
CONCRETE CHICKEN HOUSE



HOUSE FOUNDATION OF CONCRETE

The above illustrations are taken from our Cement Book "Concrete Construction about the Home and on the Farm." We mail it Free.

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Made of sound material they are built to last; they are better, as is invariably proven, after a year's running than when new; besides, after being "worked in" there is no chance of trouble from faulty design. When you hear of a car lasting from six to ten years you will find that it is a high grade make so referred to.

Some of the Makes We Offer

With no interest in pushing any particular make we offer you the advantage of being able to select from all the reliable makes with the assurance that we do not deal in any but cars of known quality and worth, such as the Pierce-Arrow, Stevens Duryea, Packard, Peerless, Rambler, Stearns, Lozier, Mitchell, Locomobile, White Steamer, Oldsmobiles and dozens of other high grade makes too numerous to detail in limited space here, but which are specified in our Bulletin (free on request).

Why We Can Sell at Such Low Prices

We are the largest dealers in the world in new and second hand automobiles, and constantly keep in touch with enthusiastic owners who get the advance models, which makes them anxious to dispose of their present cars with the least possible delay. This is where our prompt deal and spot cash methods enables us to buy cars at figures so low that we can afford to sell cheaper than any dealer we have ever encountered. Besides, buying and selling in such enormous quantities we do not have to hold out for large profits on individual sales, preferring to rely for our remuneration on the volume of business.

Cars for Pleasure and Business

While in the large cities we sell mostly touring cars, roadsters and cars used in the pursuits of pleasure, we have come to realize the other field for the use of the motor car—that of light transportation, and are prepared to fill any requirement in that direction, so if you want a car for business or combination write us your wishes and let us advise with you.

We Are Sure to Have the Car You Want

Our Bulletin (free on request) contains a large list, with descriptions and prices of very many well known makes comprising

Runabouts and Roadsters, all sizes and makes . . . \$100 to \$1,200
Small Touring Cars . . . 250 to 1,150
Large Touring Cars . . . 500 to 3,000

Every car we sell leaves us only after it has been thoroughly overhauled in our own shops, and is guaranteed to be exactly as represented.

References: Dun's or Bradstreet's, New York City, or Bank References any City.

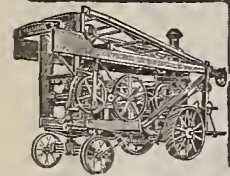
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DEATH TO HEAVES Heave, Cough & Newton's Diaphragm Cure Guaranteed or Money Back. \$1.00 per can, at Dealers, or Express Paid. 19 Yrs' Sale. THE NEWTON REMEDY CO. Toledo, Ohio.

Farm Notes

Dangerous Optimism

IN MARCH, 1907, the writer sent an article to a leading farm paper, in which we referred to the fact that the Secretary of Agriculture in his advance reports of averages and totals of crops grown overestimated them, and in so doing kept actual conditions hidden from the people. The manuscript was returned, marked "too pessimistic."

The season of 1907 verified all our claims and in 1908 we again called attention to this condition and restated our belief that a still greater shortage would occur in 1908. That year brought another shrinkage—although the department had sent out predictions of "bumper" crops—"great prosperity," etc., for the farmer.

Last April we stated in another paper "that from present indications we feared a similar shortage this year." Now for the outcome.

All through the summer great claims were made for increased acreage and immense crops, harvested and to be harvested. In the Dakotas and Canadian provinces they had the wheat and oats measured out in the granaries before the seed that were to produce the crop was sown—and even in November we read "Our corn crop greatest in history, over two and three fourths billion bushels."

Now comes the statement that our average is 25.5 bushels, against 26.2 bushels last year and a general average of 25.3 for ten years. Also that our crop will fall twenty million bushels below last year's, even with the increased acreage. It is about time for the department to introduce some conservatism into its prophecies.

What we especially want to call attention to is the average: 25.5 bushels per acre. Such an average is less than half an ordinary ear of corn to each hill (not stalk) on an acre. An average of one good ear to the hill would give a yield of thirty-five bushels per acre.

Price of land, hired help, machinery, taxes and interest will drive the farmer to the wall, with such yields. Corn to yield more than twenty-five bushels can be grown on any soil fit to grow white beans if cared for. The secretary don't need to employ expert scientists to know what the trouble is.

Commercial farming—continuous cropping to corn and wheat—is what is ruining our soils and impoverishing our people. The cessation of stock-raising, the lack of clovers, the closing up of small farms and concentrating them into "feudal estates," to be drained of their fertility by short-sighted landlords, are factors to ruin any land.

So much for land robbery and 25.5 per acre. Now for the harm done by the overestimating of our crops. The farmer is a peculiar business man. In some things he reasons on profit and loss. In others he does not.

If he buys machinery he buys on time, notes due "after harvest." Well, about harvest-time we hear "tremendous" crops—"cheap living for the poor." Mr. Farmer gets scared—his notes trouble him—he sells his wheat at seventy or eighty cents as they did last harvest here, and now the Chicago Board of Trade is selling the same wheat at one dollar and twenty-five cents and up. To whom? The laboring people—the poor and needy—and even to the farmer himself, because he unwisely sells his wheat and buys his flour.

Let the government predictions be based on actualities so that wise means may be taken to prevent trouble. If government, Grange and farmers' organizations would cooperate in this work Patten could not make his millions off the masses. J. H. HAYNES.

Balancing Your Soil Rations

[CONTINUED FROM PAGE 6]

the successful farmer of the future must have a first-class knowledge of fertilizing principles if he is to keep up with the procession, for there are few farms in the country where crop yields could not be largely increased by more intelligent use of chemical plant-foods.

A smooth, tight barn floor is the first requisite. A pair of platform scales will be required to weigh out the materials. A hand screen will also be needed if the materials are lumpy; the kind masons use is very handy for this purpose. If the materials are very lumpy a grinding-mill or old corn-sheller can be used to reduce the lumps. Weigh out the most bulky ingredient first, which is usually the acid rock, screen it if necessary and crush all lumps and spread it level on the floor. Then weigh and spread the

others on top, one at a time, and mix thoroughly with hoes and shovels. The first shoveling should be done very carefully and the layers should all be cut down evenly. Two or three mixings are necessary to secure the best results. If the dust is too severe the pile may be dampened with a sprinkler and the man who is mixing can wear goggles and a damp cloth about the mouth and nose. If the goods are not to be used at once they should be bagged and marked so that you will know which is which, for it will be necessary to mix quite a number of formulas if various crops are being fertilized.

Fertilizing to Suit the Crop

We must determine what the soil needs by actual field tests and every man who uses fertilizers should make a number of mixtures and test them on adjoining plats. There are, however, a few general principles that will guide us on any soil, for some crops. For instance, we know that such scavenger crops as corn will thrive on slowly available fertilizers, if enough nitrogen is available to start them, as they make their most vigorous growth later in the season, and decay and other changes have time to make the plant-food available. The grasses also thrive on slowly available chemicals.

The legumes are great consumers of potash and phosphoric acid, but as they have the power of appropriating their nitrogen from the air, it is economy in fertilizing these crops to cut down the nitrogen in the formula to a small amount. A "1-6-9" mixture should give excellent results.

Potatoes and other root crops require quickly available plant-foods in liberal quantities. They need nearly complete fertilizers, and the elements should be present in relatively greater amounts than are required by the crops. That surplus need not be wasted if a crop of wheat is sowed immediately after the root crop is harvested. Nitrogen is important in potato-growing and truck-farming.

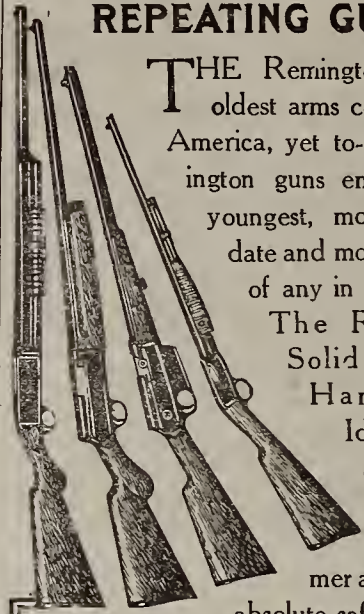
Fruit-trees do best when fertilized with slowly acting chemicals, as the readily available ingredients are often lost by washing before the trees are able to take in the nourishment. All fruit-trees are great consumers of potash, and an excellent mixture for trees and small fruit is one and one half parts of ground bone to one of muriate of potash. Small fruits that make their growth more rapidly and earlier in the season should have heavier applications, but care should be exercised about using, and losing, too much readily available nitrogen.

Corn should be fertilized heavily and potatoes are another crop where it will pay to use liberal quantities of high grade, but for small grains I have seldom found it profitable to use very heavy applications.

Do not be afraid to try mixing your own fertilizers, for there are no trade secrets you cannot duplicate if you take the time to study and post yourself. Above all do not send good money to any man that advertises a particular sure-winning formula that he will sell you for a few dollars. Put him down as a fake and study your experiment station bulletins or, better still, seek advice from the men who are conducting the stations for your benefit. Remember, however, that no man that can give you long-distance advice concerning your soil and its needs in anything other than general terms, and make good every time. Only study and experiment on your own part will tell you what your particular soil needs. Be assured the time it takes will be well spent.

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THE Remington is the oldest arms company in America, yet to-day Remington guns embody the youngest, most up-to-date and modern ideas of any in the world. The Remington Solid Breech Hammerless Idea does away with protruding hammer and insures absolute safety.

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Put on the market Oct. 1, 1909. Don't buy a .22 till you see it. Shoots .22 short, long and long rifle cartridges.

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A Wonderful Business Story

We have told in a book—which we ask you to send for—one of the greatest business stories ever told. A story of how John N. Willys stepped in two years to the topmost place in motordom. Of how *Overland* automobiles rose in 24 months to this year's sale of \$24,000,000. How a factory has grown like magic to a pay roll of 4,000 men—to a daily output of 30 carloads of automobiles. And how a large part of the demand of the country has been centered around one remarkable car.

The Discovery

Here is an outline of the story—just enough to make you want it all.

Two years ago, Mr. John N. Willys was a dealer in automobiles. There came to him one day a remarkable car—evidently the creation of a mechanical genius. The simplest, sturdiest, smoothest-running car that anyone around there had seen.

The name of the car was the Overland. And the price—then, \$1,250—was as amazing as the car itself.

The sale of this car spread like wildfire. Each car sold brought a call for twenty others like it. Old and new motor car owners came by the score to deposit advance money—attracted by the Overland's matchless simplicity.

But the cars did not come. And when Mr. Willys went to the makers he found them on the verge of receivership.

The genius which had created this marvelous car could not finance the making in the face of the 1907 panic.

The New Start

Mr. Willys in some way met the overdue pay roll—took over the plant—and contrived to fill his customers' orders.

Then the cry came for more cars from every place where an Overland had been sold. As the new cars went out the demand became overwhelming. The factory capacity was outgrown in short order. Then tents were erected.

Another factory was acquired, then another; but the demand soon outgrew all three.

During the next fiscal year these factories sent out 4,075 Overland cars. Yet the demand was not half supplied.

Dealers fairly fought for preference. Buyers paid premiums. None could be content with a lesser car when he once saw the Overland.

All this without advertising. About the only advertising the car ever had was what users told others.

The Pope-Toledo Plant

Mr. Willys' next step was to buy the Pope-Toledo factory—one of the greatest automobile plants in the country. This gave him four well-equipped factories—just 16 months from his start.

But the Toledo plant wasn't sufficient. So he gave his builders just 40 days to complete an addition larger than the original factory.

Then he equipped these buildings with the most modern machinery—with every conceivable help and convenience—so that cars could be built here for less than anywhere else.

Now 4,000 men work on Overland cars. The output is valued at \$140,000 per day. The contracts from dealers for this season's delivery call for 20,000 cars.

Now this man has acquired 23 acres around his Toledo plant. And his purpose is to see—from this time on—that those who want Overlands get them.

Marvelous Sales

Dealers had ordered 16,000 of the 1910 Overland models before the first car was delivered. That means that each Overland sold the previous year had sold four others like it.

And without any advertising.

This year's Overland sales will exceed \$24,000,000. Yet the Overland is but two years old.

The \$1,000 Overland

This year an Overland—better than last year's \$1,250 car—is being sold for \$1,000. That is because the tremendous production has cut the cost 20 per cent.

A 25 horsepower car, capable of 50 miles an hour, for \$1,000, complete with lamps and magneto. Never did a maker give nearly so much for the money.

There are higher-powered Overlands for \$1,250—\$1,400—\$1,500. They are just as cheap in comparison as the \$1,000 model.

The Overlands are unique in simplicity. They operate by pedal control. A ten-year-old child can master the car in a moment.

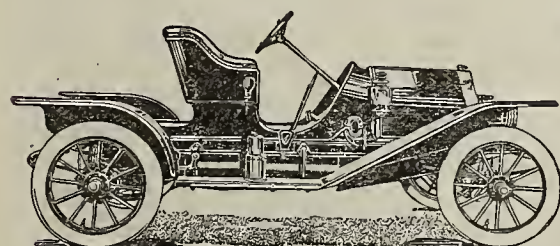
They are made in the same factory, and by the same man as made the Pope-Toledo—a \$4,250 car. The reason for the price lies in the production of 125 cars per day.

Get the Whole Story

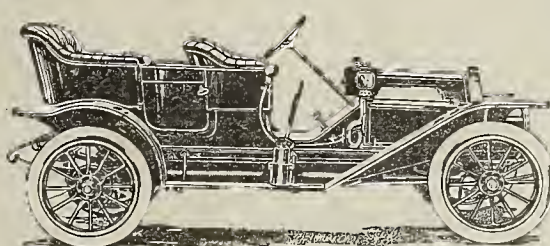
Send me this coupon to get the whole story, told in a fascinating book. Learn about the car which in two years captured so large a part of the whole trade of the country. See what has done this—what there is in the Overland to make it the most desired car in existence. Please cut out this coupon now.

F. A. Barker, Sales Manager, 52
The Willys-Overland Company
Toledo, Ohio

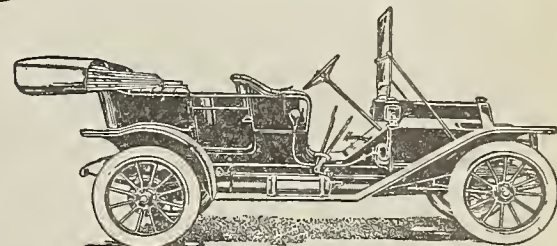
Please send me the book.



Overland Model 38—Price \$1,000. 25 H. P. —102-inch wheel base. Made also with single rumble seat, double rumble seat and Toy Tonneau at slightly additional cost.



Overland Model 41—Price \$1,400
40 H. P. —112-in. Wheel Base—5 Passengers



Overland Model 42—Price \$1,500
Either Touring Car or Close-Coupled Body
Top, glass front and gas tank are extras.

All Prices Include Magneto and Full Lamp Equipment.

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The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.



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Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/4 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

The Mystery of the Conservation Movement

THOMAS R. SHIPP, of Indianapolis, is always secretary of some association, or commission, or joint committee or something on conservation. He used to be Senator Beveridge's secretary until Chief Forester Pinchot took him away from the senator—since which time he has been engaged in conserving our national resources as an exclusive business.

The other day an Indiana politician—one of the sort that never can see what posterity has ever done for us—rushed into Shipp's office in Washington and breathlessly shouted, "Tom, are you crazy? This conservation is a whale of a thing, isn't it now, to get the American people all excited about! Ain't you ashamed of yourself!"

And that is the real trouble about the conservation movement. The people who ask "What has posterity done for us?" can't understand it. They can't understand it, because it is unselfish. Pinchot is unselfish. All the conservationists are unselfish in their demands that the rights of posterity be safeguarded, while the practical politicians want people to be allowed to make money—now. And the beautiful thing about it all is that the American people are "all excited" about a thing that is at its core unselfish. All our hearts will be clearer and purer, and our politics will be on a higher plane henceforth because we are becoming absorbed in racial rights in which we can have no immediate concern. But there are people who will never, never understand.

*

Japan has been doing for centuries what Mr. Pinchot would like to have us begin to do—taking care of her forests. In Japan the owner of a forest patch must ask permission of the authorities if he wishes to cut a tree, and he must plant two or three to replace the one cut. Japan has forty millions of people on less than the area of one of our smaller states. And as a result of her forest policy, Japan is selling one million railway-ties in one consignment to the Santa Fé Railway Company if we are to believe a newspaper report. And this from one of the oldest nations of the earth, to the one that owned a continent of forests a century ago.

Switzerland had her "Water-Power Trust" scare a dozen years ago. The mountain republic solved the problem by assuming public control of all water-powers and making water-power revenues not already granted to private persons a part of the public revenues. Switzerland has no coal, and she possesses a million horse-power in her Alpine streams. And she has the initiative and referendum instead of Secretary Ballinger and a bossed Congress.

* * *

The Kansas Experiment Station is studying pellagra and blind-staggers as forms of the same disease. Our brotherhood to the beasts is proved through our mutual diseases. We may find the cure of pellagra through the investigations of the veterinarians.

Business is good again—and again the railways are unable to haul their tonnage. If the Mississippi, the Ohio, the Missouri and our other improvable waterways had been carrying their proper tonnage last summer the congestion of freight would not have occurred. How can business stay good unless transportation facilities are adequate?

Your Grandson's Birthright

The Kansas Farmer publishes a proposed bill for "the Protection of Land Fertility." The bill if passed would make it unlawful to plant certain crops on land used for the same crops the year before, and provide a fine of not less than ten cents nor more than twenty-five cents an acre for each violation. Our Kansas contemporary does not support the bill, but ventures to say that "the time has come in this country when soil robbers should receive their deserts." And so approaches the time when the old idea that a man may do as he likes with his own may become obsolete. Possibly posterity—the race—has some contingent interest in the preservation of the capacity of this terrestrial ball to feed it. It's worth thinking upon.

Squealing is a poor way to get out of a tight place.

One way to insure a fine neighborhood is to be a fine neighbor.

The less said about it when you are tired the sooner you are rested.

If you expect to own an aeroplane don't take a flyer on the market.

You cannot thaw a frozen heart by feeding chili con carne to the stomach.

No horse will be allowed to eat its head off if the owner keeps his own.

You cannot produce streaked bacon by feeding your hogs anti-fat on alternate days.

The shortest road from farrow to the block is the richest one to drive the pigs over.

Most any hen lays the golden egg nowadays when eggs are worth forty cents a dozen.

Competition for the Corn Belt

PORK-PRODUCTION has been so long based on corn-growing that lots of us smile at the claim of western Canada that they can grow pork there economically, as well as at the suggestion that the South can compete with the corn belt in growing hogs. But do not let the vision of the razor-back lead you to a wrong conclusion. Read Circular No. 30 on Hog-Raising in the South, and think. Maybe you can improve your own methods along similar lines, wherever you happen to live. This circular tells of hog-raising in Alabama, in pastures of corn, cow-peas, soy beans, chufas, sorghum, alfalfa, peanuts, wheat, rye, vetch, rape and clover (distributed in fields about a central field of Bermuda grass) by a system which produced pork, with very little corn, at an expense of one and a half cents per pound to three and a half cents. You can't grow pork by this plan and avoid thought—but if you are willing to celebrate a little, get this circular. The way the price of corn acts, it will pay to look for a substitute.

With corn at seventy cents—or thereabouts—it may interest you to remember that brood-sows are habitually wintered by some of our most successful stockmen on third-cutting alfalfa-hay and some skim-milk. At the Nebraska Experiment Station they were brought through on the alfalfa alone. Of course they should by good rights have grain for a couple of weeks before the pigs arrive.

* * *

The best way to get even with a fellow is not to.

Although the farm, like history, repeats itself, it is always interesting.

The higher the prices of food-stuffs go, the lower the most of us have to live.

Wetting a cow's teats doesn't make milking any easier than licking a pencil makes writing easier. Both are bad habits.

"The soil robber should receive his deserts," says an exchange. Perhaps his deserts will come to him by merely accenting the first syllable.

Reading makes the farmer full of his subject, conferring with his neighbors makes him a ready man, but it is not until he applies it to his farm that he becomes an exact man.

Coining golden ears of corn into golden molds of butter is a golden pathway to prosperity, and the transmutation of alfalfa into cream is a better alchemy than that which the ancient wizards sought after.

The agricultural colleges seem to have met every demand upon them—except that of educating farmers. Colleges that take ten boys from the farm and send back only three are indictable for the crime against which they are supposed to preach—soil robbery. The professors must find some way of returning to the farms the goodness they receive, or something will have to be done about it.

The Best Soil for an Agricultural Education

THE town or city boy who takes his degree at an agricultural college may make a good farmer; but before he becomes one he will have to pick up in the school of experience a host of things that the farm boy has learned without knowing it. The chances are that the city boy will fail with all his science, while the farm boy without it will make some sort of stagger at success on the farm.

An education is schooling plus life. The city boy on the farm may have oodles of schooling, but he lacks the farm life. Young Julius Cohen, son of the proprietor of the Racket Store, knows more of merchandising at ten than Young Smith, the graduate of the business college, who has come in from the farm to learn store-keeping, in spite of the latter's diploma. So Cohen will make a success as a merchant, while Smith is likely to trade his paternal farm for a stock of goods and go through bankruptcy to a clerkship at fifteen dollars a week behind the counter of young Mr. Cohen. He will be at forty where Cohen was at ten—in store-keeping. But he stood in farming, at ten, equally ahead of Cohen.

The best soil in which to sow an agricultural education is found in the boy who has gone through the primary grades in his own home on a farm if you can do it without inoculating him with town-fever. To throw away all that part of a boy or girl's education which is absorbed about the family fireside, whether it be in trading or farming, is an awful economic waste.

* * *

The fellow who is always going to do something is not the coming man.

A mean farmer worshiped the ground his wife walked on, and so he never gave her a chance to get away from home.

There is a great deal of misapplied energy in the world; lots more folks push a man's wagon when he is traveling the down-hill road than when he is going up the hill.

The first thing you know, winter will be over, rush work will claim your attention, and your wife will be scraping around gathering up cobs and chips to burn in place of the wood you might have cut and hauled up in early spring, when you had little to do.

The nineteenth century saw the development of the agricultural West. The twentieth will be the era of the agricultural South, and the rejuvenation of the neglected East. The farms of our grandfathers are as good as they ever were, and better than our ancestors ever thought. Intensive farming is the magic that renews the youth of New York and Virginia. And when once learned, intensive farming is just as easy as the extensive sort—just as pleasant and just as dignified.

OUT OF THE LETTER-BOX

EDITOR OF FARM AND FIRESIDE:—

Lewis' columns are all right. They are opening the eyes of the people, even of many who hitherto were classed as "mossbacks."

Friend W. T. Smith's fears are unfounded. We doubt sincerely whether he can define Socialism, and for his special benefit (and perhaps it might benefit others) we would suggest that Mr. Lewis give us a brief synopsis of Socialism. The long winter nights will afford us opportunity to investigate the subject.

The writer is not an avowed Socialist, yet he agrees with them in their object. Our first vote was for Lincoln because we believed he was a friend to the enslaved black man. We were opposed to slavery of the black man and we are equally opposed to the slavery of the white man as he is exploited to-day all over this nation as well as over others.

If Socialism or any other "ism" can crush to eternal death the "systems" that are crushing the life out of our laboring masses—in field, farm and factory—we welcome it.

Indiana.

J. H. HAYNES.



WHEN Theodore Roosevelt appointed his Home Life Commission, to investigate means to improve conditions of the rural population, he had a very definite idea that there was a great work to be accomplished, and a very vague notion of what it was or how to do it. It wasn't that he was worried about the ability of the farmer to take care of himself. But he had been impressed that the tendency of population to move from the farm toward the city is bad for both farm and town. The immigrants of a generation ago largely sought the 'country, and to-day they constitute a magnificent section of the population of the great farm states of the West. But the immigrants of to-day—and the number is vastly greater than it used to be—tend to congest in the cities. They became laborers, waiters, small tradesmen, menials of all kinds, rather than to go to the country. Therefore, the cities have in the last three years been crowded with men seeking work. The country has been filled with jobs seeking workers. Is there any way of getting the two classes together?

That is just one aspect of the problem that was in the mind of Mr. Roosevelt. Certainly it was a thoroughly practical matter; practical enough to deserve better than the immense amount of ridicule that was heaped upon the whole project.

The immigrants of a generation ago drifted to the country and became "hired men" on the farm. I recollect very well, as a boy in northwest Iowa, when the "hired man" was Ole one season, with an ambition to "go oop in Sout' Da-ko-tay an gate one dem quart sactions." Ole went at the beginning of the next spring, and Larry took his "job." Larry was saving up to get Katrina over from Ireland; they were going to get married "an' rint a farrum, an' thry fer Nebrasky as soon as they c'd get the price." Well, they went to Nebraska; and a raw German boy succeeded him and I learned more German trying to teach that boy a bit of English than you can contract in two years in college. Hans lives on the old farm now, and owns it; Ole has a half-section in the Jim River valley of South Dakota, and Larry, thank you, has long since retired from his own farm and is auditor of the county in which he lives, in middle Nebraska.

But how about the situation to-day? Larry's three boys all live in town with him, and they don't want to live on the farm again. Ole's oldest daughter is married to a man in Minneapolis, who himself started as a farm laborer and is now in business. Hans has kept his children on the farm, thus far; but it isn't going to be big enough for all of them, and one of them is being educated to be a doctor.

That is what the hired man of thirty years back could do for himself. Farms that would cost one hundred and twenty-five dollars an acre to-day could be had for one dollar and twenty-five cents. Why, to-day one must needs be something of a capitalist even to go out into Alberta and get enough land to make a good farm. I can recollect when, in the newer days of the West, boys went from the towns and cities to the country, in the hope that they could "take a piece of land" if their employment was too uncertain. Now they can't get the land, and they don't seem to have any taste for it, anyhow.

The American-born farm boy, on the other hand, doesn't want to stay on the home farm always, and there is every year less and less chance for him to go to a new country. So he goes to town.

I met one of them in a New York hotel the other day. He was an attendant on a marble-upholstered wash-room. His function was to shake out an excuseless little towel for each customer, dust his hat and rub off his boots with a cloth. He wore a uniform in gray and gold, and had a perfectly correct bored look. His situation looked about as uninviting as could be imagined.

* * *

BUT all this is beside my purpose, which was not to lament the trend of the country boy of to-day, but to place before you two measures that are going to mean a lot to the country boys of to-morrow, and their sisters. Senator Dolliver has a project of formulating into a practicable, working scheme one of the things involved in the great, but inchoate, project of Roosevelt. Senator Dolliver has introduced two bills looking to a nation-wide improvement of the rural schools and to their better adaptation to the conditions of the country population. He is very sure that if he could

By Judson C. Welliver

Country people are beginning to realize that education, like the mail, is a thing they should not have to travel to town for. But the movement for more and better rural education will be pitifully slow unless it is unified and encouraged. Senator Dolliver proposes to invoke all the powers of Uncle Sam to give force to that movement, as Mr. Welliver here relates. This page deserves careful reading.—EDITOR.

get them passed and their provisions enforced they would some day make him more fame than will his authorship of the Dolliver-Hepburn rate law or his great tariff fight of last session. So am I.

One of these bills provides that the government shall cooperate with the states in the development of a sort of university extension work of the agricultural colleges of the country. That is, it looks to conducting instruction in the trades and industries, home economics, etc., people who are not able to reside at the college. This might be done by mail instruction, supplemented by courses of lectures in various localities; or by the development of divisions in the work of farmers' institutes and the like; by cooperation of agricultural college authorities with societies and clubs of interested people. The measure does not attempt to develop the plan; but it does provide that the federal government shall give to such work, in each state, as much as the state itself will appropriate.

This looks to carrying the benefits of the state agricultural colleges to people who are not able to go to college. In a generation of correspondence instruction, of clubs, public libraries, cheap printed matter and cheap transportation through the mails, similar projects have been made highly profitable when conducted on a merely commercial basis. There has been enough experimentation with this process of education to justify the belief that vast benefits could be secured from the project.

But the more important and sweeping of the two bills is that whose title declares it is a measure "to cooperate with the states in encouraging instruction in agriculture, the trades and industries, and home economics in secondary schools; in preparing teachers for those vocational subjects in state normal schools, and to appropriate money therefor and to regulate its expenditure."

* * *

THIS measure is not by any means new. It is a favorite proposal of Dr. Willett M. Hayes, Assistant Secretary of Agriculture, and of many other students of the problem of rural education. This bill aims to establish agricultural schools of lower grade than the colleges, but higher than the district schools, that would give education in both the academic and the practical branches. In the aggregate, the measure looks to an appropriation of ten million dollars annually for this purpose.

The advocates of better rural education have long recognized that the country schools ought to be centralized. With fewer and larger schools, they could be graded, as town and city schools are; higher branches could be taught, and better instruction given by more competent teachers.

Now, this proposal of improving the country schools designs to give the children of the country more and better schooling, without sending them to town; to teach them something of the practical science of agriculture, of the adaptation of soils to crops, of crop rotation, of scientific preservation and fertilization of the land, of proper selection of seeds and of the thousand problems of the farm which, in this age of progressive agriculture, every farmer needs to study.

In short, it is proposed to educate the children for the farm and toward the farm, rather than away from it.

To do this, there must be a supply of efficient teachers; ultimately, many thousands of them. Agricultural normal schools would be a fitting and descriptive title for another type of institution which Senator Dolliver would like to see sprinkled all over the country. He would like one in every half dozen counties, teaching young men and women from the farms the things that they could, in turn, take back and teach in the improved and enlightened country schools.

THE next step in this project of better and more practical education would be a cooperation between nation and states in the betterment of country primary schools. Senator Dolliver has not undertaken to solve that part of the problem as yet, because it is useless to do so until the normal schools can be assured, to turn out the teachers. But the natural procedure would be along this line: A provision might be made that whenever a country township would consolidate all its districts, establish a central school, provide transportation of pupils to and from that central school, and raise the grade and standard of work, then the federal government's aid should be given to the maintenance of this improved school.

The township central school is no longer an experiment. In Oklahoma, newest and in many ways most progressive of the mid-Western states, they will point out to you handsome brick school-buildings out on the prairie, with automobiles owned by the township hurrying the children in at morning, and back home at noon, from six and seven miles around and doing it economically. These schools have been a success East and West alike.

* * *

SENATOR DOLLIVER has the backing of some of the most potent bodies in the country. Educators all over the land are for his proposals, and expect to establish headquarters and agents in Washington to urge the matter upon Congress. The American Federation of Labor is strongly supporting the plan. Various national organizations of farmers have committed themselves to it.

The friends of education for the country—of practical, helpful education that will help to keep the boys and girls on the farm—can do no better work at this time than to get behind these bills and push for their passage. They are Senate Bill 4,675 and Senate Bill 4,676. Write to your congressman that you are interested in these measures and would like a copy of each. Ask him to look into their merits and to give them his support. Tell him of the school conditions in your own community. Suggest, particularly, anything that can be done to improve the plan.

Teachers and principals in country schools, especially in those that have been consolidated on the township district plan, can make their advice and counsel highly valuable. They should write to Senator Dolliver any ideas which they have evolved from their experience.

We common folk are just beginning to realize the possibility of making ourselves felt in our own government in other ways than through our votes. The best way is to do a little personal communicating with our representatives. After you have thought over this project, if your mind works at all like mine, I believe you will agree that these two bills mean more to the farmer than almost any other matter now before our Congress. But your silent approval is not going to do them any good.

The people who get things from Congress are those who go after them. Congress gave the country the inestimable benefit of rural free delivery, because the farmers went after it. Congress will give the country the great boon of better schools, through cooperation with the states, if only the farmers will make perfectly plain their interest in and insistence upon it.

Do you know that if one in every ten subscribers to FARM AND FIRESIDE would, after reading this article, write a letter to the senator indorsing his bill, the senator would get forty-five thousand letters? Do you know they would come from every state in the union? Do you realize that for the senator to be swamped by such a mail would cause a real sensation? It would be in all the newspapers. It would be told by the magazines. It would force the attention and interest of other farm journals. It would be the instant evidence of the determination of the country population to secure the benefits which some people have suspected they didn't want because they didn't make the demand.

Sit down and write a letter to Senator Dolliver about the matter. Mention FARM AND FIRESIDE's Farmers' Lobby if you like. I would like to drop into his office some day next week and see his desk buried in your letters. I can promise that if you will do your part it will get results that will surprise and gratify every friend of the cause of better country schools.

The Mystery of Hillcrest

First Instalment of a Thrilling Mystery Story

By Izola Forrester

Chapter I.

"I THINK that is all. You understand the sort of a person I need. I wrote to Doctor Buell to find me some one whom he could conscientiously recommend. How long have you known him, may I ask, Miss Calvert?"

The girl, who stood between the broad west window and the woman at the little writing-desk, colored faintly.

"About a year, I think."

"Have you ever worked for him professionally?"

"Oh, no, not at all. I—I have never worked in a strange family before. The doctor was my father's friend. He knew I was anxious to obtain a quiet position after

father died, and spoke to me of this place."

"So you are not experienced. It really doesn't matter here. You will only have the care of Arline, and she is seven. Look after her, and I may ask you to read to me sometimes."

"I am quite a fair writer, Mrs. Sturges." Nan spoke earnestly. She hardly knew how to reach the sunny side of this slender, tired-looking woman, with the many rings on her slight, pale hands, and the troubled, repellant look in her gray eyes. "Perhaps I could be of assistance to you in your social correspondence."

"I have none, thank you." The ghost of a smile passed over Mrs. Sturges' face. She rose and touched an electric-button.

"I want you to know my housekeeper, Sarah Daggett. You will go to her on all ordinary matters. I do not care to be troubled. Arline is riding now. I will send her to you when you have rested. I think that is all."

There was a silence in the great room. Nan waited, the figure at the desk was writing. The yellow silk curtains under soft écreu net were drawn aside at the windows looking riverward. Far, far below Hillcrest the Hudson wound its way like a silver serpent between the high bluffs and rocky headlands. Like some old castle on the Rhine, Hillcrest perched on the topmost height of a frowning bluff. Its verandas overhung a sheer depth of two hundred feet. Its towers of gray stone overtopped the tallest pine of the grove whose branches gave forth a faint, murmurous sighing around the house.

The utter isolation of the place swept over Nan suddenly. If it was lonely to her, a newcomer, what must it be to the woman who lived here constantly, with no other companion than her little girl, no other faces to look on but those of a few servants.

With a sudden impulse Nan took a step toward the desk. She had heard from the doctor a little of the shadow that lay over Hillcrest. She knew that in the first year of her marriage, even while she had been traveling on her three months' honeymoon through the orient, Eloise Sturges had lost her husband. At that time the case had been a nine days' wonder. She had been the loveliest bride of the New York season, and had married at Easter, the eldest son of Senator Sturges of Washington. The doctor had told the story in his brief way the day before, when he had advised Nan against going to Hillcrest.

"If you can get anything else to do, don't go to that house. It is no fit place for a happy, buoyant girl like yourself, although, heaven knows, there isn't a soul I know more in need of youth and happiness about her than poor Eloise Sturges."

"Why do you call her poor?" Nan had asked him. "She has inherited everything her husband left, has she not?"

"Yes. Nearly a million, they say. His share in his father's business goes on for the child, Arline. His partner is trustee and guardian for her, But Mrs. Sturges received all of the real estate and ready cash. Sturges went on a hunting expedition while they were in Bombay and never returned. The natives in the party said he had been devoured by a man-eating tiger in the jungle above Naishupur. A relief expedition was sent by our consul, and not a single trace could be found of him. Eloise Sturges remained there over a year, until after Arline was born, waiting, and hoping

for some word of him. She even penetrated herself the wild country where he had been last seen."

"And found nothing?" asked Nan.

The doctor shrugged his shoulders and smiled.

"Yes. She brought back Tunga Din with her."

"Who is he?"

"Tunga Din? He is the soul of Hindustan wrapped in yellow silk, and playing Indian Idol at Hillcrest." The doctor laughed. "If you go to Hillcrest, let him alone."

"Why does Mrs. Sturges have him there?"

"To remind her of India, possibly." It had been impossible to penetrate behind the baffling, teasing merriment in his keen, dark eyes, and in the hurry of the journey Nan had almost forgotten what he told her. But now, as she watched the lonely, beautiful woman at the desk, she remembered, and a flood of quick, girlish pity swept over her.

"If I can help you in any way at all, please, please let me, Mrs. Sturges," she said. "I, too, have just lost a dear one, my father, and I know from Doctor Buell of your loss—"

Mrs. Sturges rose from her chair, and turned, her eyes flashing with anger.

"You know? How dare Doctor Buell make free with my private affairs—"

She stopped, one hand holding the soft laces about her throat. Somewhere in the distance, crashing into the utter silence of the place like a bomb explosion, there came a loud succession of shrieks for help. To Nan, who stood rigid with horror, the noise seemed to come from overhead, and even as she stared instinctively toward the window, she saw a form fall just beyond the veranda rail, fall directly down into that great chasm of jagged rock and sheer precipice.

Before the cry had died away on her own lips, Mrs. Sturges had regained her presence of mind and started for the door.

"Stay where you are," she called back to Nan, but before she could reach the door, there came the sound in the hall of a fierce struggle, of falling furniture and hurried steps.

smashed fern-jar was spread over the lower hall, and the plant itself was torn to bits.

But on the second landing of the staircase, where the mellow golden and violet light from an oriel window fell on his strange figure, was the East Indian, Tunga Din.

"Tunga, go back, I beg of you, go back," implored Mrs. Sturges, and before Nan could recover from her amazement, the figure had vanished, and Mrs. Sturges fell in a dead faint at the foot of the stairs among the wreckage of fern and marble.

Chapter II.

IT HAD been late in the afternoon when Nan arrived at Hillcrest. Although she begged to be allowed to render some assistance, both Sarah Daggett, the housekeeper, and Villette, Mrs. Sturges' maid, insisted that she retire to her own room and stay there.

It was on the opposite side of the house from Mrs. Sturges' apartments. A broad, circular staircase wound up from the large entrance hall that divided the great house in two. From the rotunda formed by it, several hallways branched out at the second floor. In the south wing were Arline's bedroom, play-room and a pretty white and pink nursery, from which Nan's chamber opened. She also had a little sitting-room that looked riverward, and, taken altogether, it seemed a charming home that fate had given her.

"You will find everything very convenient," Villette told her. She was a quiet, somewhat sad-looking Frenchwoman, very different, Nan thought, from the usual flippant maid from Paris. "If you require anything, ring three times and I will come. I will send Miss Arline to you when she comes in from riding."

"Does she ride alone?" asked Nan. "Surely not, in this lonely place."

"She is not alone. Mr. Forbes is with her?"

"Mr. Forbes? Who is he?"

"Madame does not permit us to gossip, Miss Calvert."

Nan took the reproof in silence. She remembered a bronze Japanese image down in the library. It certainly represented the policy of Hillcrest. There were three apes, half crouching together, one holding its paws over its eyes, the second pressing them to its ears, and the last covering its mouth. Beneath the three figures, deeply engraved in the bronze pedestal were the words, "Speak not; hear not; see not."

Villette showed her where the pearl-tipped electric-buttons were hidden in the walls for the lights and also for communications down-stairs. There was one for Mrs. Sturges, one for Villette and one for the housekeeper.

"There is also a house telephone," said the maid, leading the way to the little passage between the nursery and Nan's room. The telephone was on the wall. Beneath were several push-buttons.

"Mrs. Sturges does not wish you to use this at all. The call-bells are sufficient, she says. These rooms were formerly her own suite, and she had this put in. But in case of Miss Arline being ill in the night, you may use it. Press this lower right-hand push-button and insert this in the socket, so."

"I will remember," Nan felt suddenly faint from her journey and the excitement. "If I could have something to eat, I would be grateful."

"Your meals are to be served here, with Miss Arline. You will have dinner at one, tea at five and a light supper at seven. Mrs. Sturges always takes tea in the nursery with her daughter."

Villette left the room, and for a moment Nan stood motionless, then she remembered something else she wanted to ask the maid, and hurried to the door. It was locked from the outside with a spring catch.

Her trunk and suit-case had been placed in her bedroom, and she spent the time unpacking them. It was nearly five by her little leather-bound traveling clock when she heard the click of the outer door, and Villette came in with a little girl of seven. She had been crying, and broke away impetuously from the clasp on her wrist as soon as they were inside the door.

"I want to see mama, Villette, I tell you."

"Mama is indisposed," said the maid calmly. "You will have your tea without her to-day. Your new governess is here."

Arline turned around, her blond curls tossed from riding in the wind, her blue eyes wet with rebellious tears.

Nan soothed her as best she could. As soon as she had tucked her into the dainty pink and white bed and was certain that she slept, she went to her own window,

[CONTINUED ON PAGE 38]



" . . . the figure had vanished, and Mrs. Sturges fell in a dead faint . . . "

"Oh, Mrs. Sturges," gasped Nan, "what is it?"

The doors opened with a bang. A middle-aged woman burst into the room, her eyes almost bulging from their sockets with terror. She slammed the door after, and leaned heavily against it.

"Daggett, let me past instantly," said Mrs. Sturges, trying to force her way by, but the housekeeper shook her head.

"Indeed, and you'll not put your head in the lion's jaws if I can stop it, Mrs. Sturges," she cried, panting heavily. "It's that devil of a yellow rascal, and may God pardon me for the names I have to call him. He's murdered Kato."

"Murdered Kato!" repeated Mrs. Sturges, shrinking back in horror. "Oh, no, no!"

"He has. He threw him out of the window."

"What window? How dare Kato go up in the tower at all? Let me by."

She pulled at Mrs. Daggett's stout wrist and reached the door. Nan hurried after her, thinking to protect her against some unknown peril. The noise in the hall had suddenly ceased. As they stepped out into the long, dim corridor, only one figure confronted them. All about were signs of a fight. The costly rugs were torn up and tossed helter-skelter down the broad oak staircase. A marble head lay shattered at the landing-place where it had been hurled from its pedestal, a

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You Will Get This Picture With Your Subscription

Her Mother's Voice Our New Year's Gift To You

THE noted artist, Balfour Ker, has painted for FARM AND FIRESIDE a wonderful picture, entitled, "Her Mother's Voice." It is a greater picture than his famous "Home, Sweet Home," which delighted hundreds of thousands of our readers last year. As a New Year's Gift to our readers we will send a copy of "Her Mother's Voice," in colors, reproduced on heavy paper, size 11 by 16 inches, with every subscription, as explained below, if ordered within one week from now. This great picture is a beautiful work of art, contains no advertising, and will come to you carefully packed, all ready to hang up in your home.

A Great Chance

EVEN though your subscription to FARM AND FIRESIDE may not have expired, it will pay you to renew now in advance on the order blank below and obtain the painting, "Her Mother's Voice," without cost. Your new subscription will be entered to begin the month after your present subscription expires.

To New Readers

THESE great offers are also open to new friends of FARM AND FIRESIDE. To new readers we guarantee that FARM AND FIRESIDE will give satisfaction. A whole year—24 numbers—will now cost you only 35 cents. If you are not satisfied with FARM AND FIRESIDE after subscribing we will gladly send your money back.

What Readers Say About Farm and Fireside

I CONGRATULATE you on the improvements you are making in your magazine. I consider it indispensable as my subscription will testify. I enjoy and indorse the writings of Mr. Lewis. We need to cast the light of public inquiry on our public servants, irrespective of the parties they represent.

Very truly yours,

H. B. HAYES.

6 Madison St., Adrian, Mich.

Having found FARM AND FIRESIDE a valuable and up-to-date magazine in the past, I wish you success in the future, in producing such a large and well-finished paper. It pays a subscriber to take the paper four years.

42 Belmont Street.



HER MOTHER'S VOICE

*It sounds to him like her mother's voice,
Singing in Paradise;
He needs must think of her once more,
How in the grave she lies;
And with his hand, rough hand he wipes
A tear out of his eyes.
—From Longfellow's "The Village Blacksmith."*

I remain yours,
JAMES A. BURKE, Worcester, Mass.

with the good-roads movement; one by John Snure, the noted Washington writer, on James Wilson and his work as Secretary of Agriculture, and one or two more to follow. The above are but a few of the many big new features of FARM AND FIRESIDE.

A Few Great Features For Farm and Fireside

THE Editor promises that FARM AND FIRESIDE for 1910 will be the greatest farm paper published. No expense has been spared to secure the leading men in every line of agriculture to give their best writing to FARM AND FIRESIDE.

Our Horse Expert

MR. DAVID BUFFUM has joined the FARM AND FIRESIDE staff regularly as an expert writer on horse management. He stands at the head of all writers on horses in America.

He will at once furnish us a series of articles on breaking, managing and handling horses. These will deal with all the vices of horses, like kicking, shying, running away, balking and the like, and will tell how they may be scientifically treated and cured. He is a farmer and knows the horse business from the farmer's point of view and their needs. That's the way he will treat the subject in FARM AND FIRESIDE.

Soil Management

PROF. F. H. KING, of Wisconsin, is now one of our contributors. He will write on soil management. The era of intensive farming is coming in. The Chinese, Japanese and Koreans are the best intensive farmers in the world. Professor King will tell us in a notable series of articles some of the wonderful and interesting things he has seen in a study of these wonderful little farms of the Orient. Professor King stands at the head of his profession in America. He is known all over the world as an authority on soil management. His series will be of the most intense interest to those who desire to make the most of their acres, and to all who like to know about the farms and farmers of other lands.

FARM AND FIRESIDE's "Benefactors of Agriculture" series is now running. In it the best writers in America will deal with agricultural progress as typified in the men who have made epochs. We have now on hand one on D. Ward King, of split-log drag fame written by Forrest Crissey, and dealing with the good-roads movement; one by John Snure, the noted Washington writer, on James Wilson and his work as Secretary of Agriculture, and one or two more to follow. The above are but a few of the many big new features of FARM AND FIRESIDE.

Twenty-Five Valentine Post-Cards

We have secured for FARM AND FIRESIDE readers the most beautiful set of Valentine Post-Cards in the world. There are twenty-five of them. Every one printed in gold and many colors, and every one is a handsome valentine ready to send to a friend. You can get them all without cost.

You will find a picture of some of the post-cards on page 33 of this number.

How to Get the Cards Without Cost

We will send you these 25 Valentine Post-Cards if you send us two subscriptions to FARM AND FIRESIDE—one of the two subscriptions can be your own. Each of the two subscriptions may be for two years, or one year at the prices given opposite. But remember that you must send two different subscriptions.

Balfour Ker's painting, "Her Mother's Voice," will be sent to each of the two subscriptions. For three different subscriptions we will send two sets of Valentine Post-Cards. For four different subscriptions we will send three different sets of post-cards. Each set of post-cards can be sent to a different address if desired. You must order within one week.

Your Last Chance

To obtain FARM AND FIRESIDE at the prices given below, your order must be mailed within one week of your receipt of this issue. You will receive Balfour Ker's great picture with your subscription if you use the Order Blank opposite.

Offer No. 1

35c

Send only thirty-five cents for a year's subscription to Farm and Fireside—twenty-four issues of the greatest farm paper published. By subscribing now for one year you will save fifteen cents. You will receive the Painting without cost, postage prepaid.

Offer No. 2

50c

Send only fifty cents for a two-year subscription to Farm and Fireside—forty-eight issues of the greatest farm paper published. By subscribing now for two years you will save fifty cents. You will receive the Painting without cost, postage prepaid.

If you are a present subscriber your subscription will be entered to begin the month after your present subscription expires. If your subscription has expired, or if you are a new subscriber, your new subscription will begin with the next issue. Use the name blank opposite.

FARM AND FIRESIDE, Springfield, Ohio

Flower Offers

On page 39 you will find FARM AND FIRESIDE's great Flower Offers, by which you can obtain the following great flower collections:—5 Different Rose Bushes; 4 Different Ferns; 6 Different Chrysanthemums; or 3 Hydrangeas. You can obtain these great flower collections in three ways.

Offer No. 1—Any one collection without cost if you send two subscriptions to FARM AND FIRESIDE at the prices opposite.

Offer No. 2—Any one collection of flowers without cost if you send \$1.00 for FARM AND FIRESIDE for four years.

Offer No. 3—A one-year subscription to FARM AND FIRESIDE and one collection of flowers for 50 cents. Or a two-year subscription and one collection of flowers for 55c.

To get the flowers you must order within one week.

Name.....
Street or
R. R. Address.....

Town.....

(Jan. 25) State.....

If you send two subscriptions you can get the 25 Valentine Post-Cards or one Flower Collection, also. Use the space below for the second subscription.

USE THIS ORDER BLANK

A subscription to FARM AND FIRESIDE on this blank entitles you to Balfour Ker's Picture.
Farm and Fireside
Springfield, Ohio

Date.....
Inclosed please find \$.....
for which enter my subscription to FARM AND FIRESIDE for..... years, beginning with the month of..... Also send me, without cost, Balfour Ker's great painting, "Her Mother's Voice," packed in a tube, post-paid.

To Obtain The Picture Use Order Blank or Mention This Offer



Miss Selina Lue and the Soap-Box Babies

By Maria Thompson Daviess

Illustrated by Ruth M. Hallock



CHAPTER VII.—A Send-Off for Mr. Alan

"But ain't it a good thing to think how there's a guiding hand, child, a guiding hand?"
—Miss Selina Lue.

THE stir and bustle on the bluff began early and rose at times to a tumult, for an afternoon tea was a thing that had seldom come the way of the older citizens and was fraught with the mystery of the unencountered for all the small fry. By eleven o'clock the excitement had spread telepathically to the hill mansion and was bringing the color to Miss Cynthia's cheeks and lending an additional sparkle to her eyes. Miss Cynthia's eyes, however, had been very bright through a very wide-eyed night, and her heart had been dancing in an unaccountable way since she fled through the fields with the echo in her ears.

Generally speaking, a woman prefers a first-handed wooing, but to Miss Cynthia the outburst in the grocery had had an especial charm. Her state of mind might have been guessed by the careful processes of her toilet, though she only intended to descend to the bluff for the purpose of aiding Miss Selina Lue in her hospitable preparations. The visit of her friend Evelyn had lost all aspect of an embarrassment; rather it partook of the nature of a triumph.

But her trip to the bluff, however, was postponed for an almost unendurable length of time, for in the hall she encountered Mr. Everston in the act of taking his departure after an interview with Mrs. Jackson Page. The expression of extreme harassment on that good gentleman's face conveyed the definite idea of the interview, and Miss Cynthia followed him to the veranda and invited the explosion.

"Most unreasonable, my dear, most unreasonable! The land company is willing to wait no longer than two weeks for a definite answer. It is an exceptional opportunity and the only way to settle the estate so as to insure a residue—er—suitable to your mother's—er—needs. The price of the house is, I may say, a fancy one, and I cannot see another way of getting the property on the market except at a sacrifice. Couldn't you—er—my dear, remonstrate with your mother?"

Remonstrance with Mrs. Jackson Page sounded stupendous even to the ears of her own daughter, but Miss Cynthia's head went up a trifle and she answered in tones slightly akin to those habitually used by that most impressive lady:

"If you please, Mr. Everston, proceed with the business of the sale, and when the time comes I am sure she will sign the papers. Thank you for your kindness and—your patience," and Miss Cynthia held out her hand to the flustered old gentleman with the smile that always drew Bennie Dobbs—and others. She watched him drive away in his sedate old gig, and then turned, not to the apartment of the difficult Mrs. Jackson Page, but down the hill to the bluff, where turmoil and excitement and life called.

And she found them in abundance; in fact, the bluff fairly teemed with them and spilled over and ran out to meet her. Bennie headed the onslaught and was followed by Ethel Maud and Luella Kinney and several Tynes of assorted sizes. As they brought up beside her, Ethel Maud stepped on one of her own feet in a most amazing way and fell sprawling in such a manner as to graze her little *retroussé* nose on the tip of Miss Cynthia's shoe. A mighty wail ensued, which was augmented by Bennie's most unsympathetic prediction that she would be denied the privilege of attendance at the party.

"Oh—oh—o—ho, I can go, too! I don't eat with my nose, and I see with my eyes and they won't be nothing to smell. Oh—ho, can't I go, Miss Cynthia?"

"Yes, indeed you can," answered Miss Cynthia, as she wiped the barked little dot with her clean handkerchief and failed to notice the smutty prints from the small fingers that clung to the sleeve of her snowy frock.

Mrs. Kinney hailed them from her open window with the rolling-pin. She was almost, literally speaking, elbow-deep in pies, and the aroma thereof spread across the street. Her front stoop glistened damply in the sunlight and the front walk was spotless. The gate was tied up as a signal for the children to jump over the fence

and approach their home with caution—on the grass.

But across the street the Dobbs' residence was undergoing more in the way of a general toilet than that which had been finished at the Kinney house. The front door stood wide open and the little hall and front room presented a swept and garnished appearance. All the flower-pots on the window-ledge had green-paper covers and flaunted many brilliant colors, for flowers bloomed under the ministrations of Mrs. Dobbs' easy good nature. As Miss Cynthia was opposite the gate the lady of the house came around from the side yard with a bucket of foaming whitewash in her hand and an old broom, whose brush was swathed in rags.

"Now, Bennie, I've done caught you fair! Come on and finish that last panel of fence you done got tired on last week. Make him come, Miss Cynthia." And Mrs. Dobbs smiled a jovial appeal to Miss Cynthia to use her influence with the reluctant Bennie.

"Why, boys like to whitewash, Mrs. Dobbs," answered Miss Cynthia encouragingly. "How nice everything looks, everywhere."

"Well, it oughter, fer Miss Selina Lue come round and waked us all up long 'fore five o'clock. I'm afraid to set down, fer I am so stiff that I mightn't be able to git up again," answered Mrs. Dobbs plaintively. "Be sure and notice them new lace curtains Miss Jim Peters is a-putting up in her front windows," she shouted as Cynthia started down the street. Miss Cynthia smiled and nodded as she looked over with interest at a slender figure poised on a chair by the window in the little cottage opposite the grocery. Mrs. Jim Peters waved her hand in greeting and Miss Cynthia caught a glimpse of the precious little cradle through the open door.

The front regions of the grocery were deserted and presented their usual utilitarian appearance, except that huge bunches of fragrant sweet-fern were set around in different homely receptacles and arranged with a decidedly artistic effect.

Miss Cynthia's eyes roamed delightedly over the cool, dark interior, but in a second were focused on a scene in the back of the store.

On the floor, collar flaring, sleeves rolled to his shoulders and girt by an ample gingham apron, knelt

Mr. Alan with a large tub full of squirming babies before him, and with praise-worthy despatch he was polishing off the head of Carrots of the flaming hair. The brother of Carrots wiggled and splashed and seemed intent on a deep-sea dive.

"Here, young man, I can't scrub Carrots and keep you up, too. Sit tight a moment, can't you, old slippery?" The voice had a slightly anxious note.

"Lands alive, Mr. Alan, you hadn't oughter soaped them both to onct!" said Miss Selina Lue's voice from the lean-to. "A soapy baby ain't a thing to take risks with, I can tell you."

"Could I help?" Miss Cynthia's voice was sweetly solicitous, but it acted on the be-aproned scrubber in the manner expected of a two-pound bomb. He sat back on the floor so suddenly that Carrots slipped dangerously and the other Flarity almost accomplished his plunge. A man on his knees before a deep tub of water with a soapy baby in each hand is at a disadvantage in the way of greetings to a lady who has walked right out of a dream, and not a word rose to the troubled surface of Mr. Alan's mind.

"Miss Cynthia, honey, grab one of them children, quick!" Miss Selina Lue called. "Mr. Alan ain't had the experience to manage two, and if they slip, there will be a mighty ruckus with them both in the crying way."

In a moment Miss Cynthia was on her knees by the tub, had rescued the brother of Carrots and was holding him firmly under his arms with both hands. Not for worlds would she have attempted to go on with the rites of the bath; holding up was fraught with anxiety enough for her nerves. Across the dripping, bobbing heads her eyes met the artist's, and there ensued a few moments of silent, breathless mirth that well-nigh incapacitated them both and threatened disaster to the bathers.

"Oh, Miss Selina Lue, come get him quick—I am going to let him slip in a minute!" she gasped. "Look out, Carrots is turning over, Mr. Kent! Do hold him right side up!"

"There now," said Miss Selina Lue, as she swept both babies into the curve of one arm and seized the wash-rag out of Mr. Alan's nerveless hand, "I can polish 'em off in no time. Please pick Blossom and Clemmie off the floor and put 'em in the boxes. I want 'em to stay clean fer the party. And, Mr. Alan, I wish you would dry Miss Cynthia's hands on your apron before they drip on her dress. They's a heap to do, for it's about to turn twelve o'clock now, and I want things to be beforehand."

There are some situations in life that are marked by a charm that partakes decidedly of terror, and as Mr. Kent received five slender, white, dripping fingers in his own and proceeded to envelop them in a fold of the gingham garment pendent about his waist, he was possessed by a wild desire to bolt through the back door, but he realized at the same moment that nothing so beautiful had ever happened his way before. His composure was sufficient, barely, to keep him to the enchanting task and he solemnly dried the dainty fingers one at a time without so much as a glance at the owner of them.

Now, although the heart of Miss Cynthia was a tender organ and though she fully realized the sufferings of the victim of such embarrassment, she smiled a very lovely, very wickedly mirthful and comprehending smile straight into his eyes and handed him the other hand. But if her little laugh had been intended to terrify further, it failed of its purpose, for Mr. Kent rallied to himself gloriously, folded number two in both his own hands with unmistakable warmth and smiled down into Miss Cynthia's lifted, blue-star eyes with a sweetness that was—generous.

"Lands alive, Mr. Alan, I see Charity a-going into the barn and sure as shooting she'll eat up some of the decorations! Ask her to please stay in the meadow until the party's over," Miss Selina Lue called from the lean-to where she was employed in the robing of the Flarity brothers. "Miss Cynthia, honey, please shake up the cushions and put Blossom and Clemmie in their boxes. They have done droze off on the floor here and I am in a hurry to put up the twins, who'll drop off dead-like if I don't get 'em down in a few minutes."

[CONTINUED ON PAGE 38]



"On the floor . . . knelt Mr. Alan with a large tub full of squirming babies before him"



THE HOUSEHOLD



Two Recipes for Cooking Tongue

WHEN nicely cooked, boiled tongue is a dainty few palates disdain, but as sometimes prepared the meat seems flat and almost flavorless. The English have a simple and pleasing way of preparing it that once tried is apt to be repeated indefinitely. The tongue should first be soaked in cold water for twenty-four hours, changing the water twice. Then take it out of the water, scrape it well and cut off any little bits of fat that have become discolored. Stick about two dozen cloves in it, put it in a deep saucepan with cold water to cover it well and let it simmer gently until perfectly tender. When about half done add salt to season nicely and, if liked, a little pepper and sliced onion. Skim it thoroughly when necessary. When done, take it out of the water, skin it, brush it over with beaten egg and coat well with fine dry bread-crumbs. Egg and bread-crumbs twice, then put in a pan with a large spoonful of butter and let it brown nicely in a hot oven, basting frequently with the melted butter. This is excellent served hot or cold, as preferred.

Another delightfully savory tongue is the following: Prepare the tongue as directed in above recipe and let it boil in water to cover until about half done. Make a sauce with one can of tomatoes, one cupful of beef or veal stock, one teaspoonful of chopped parsley, one small onion sliced, three or four slices of carrot and one stalk of celery. Cook together until the vegetables are tender, then press all through the colander, season nicely with salt and pepper, then return it to the fire. Put in the tongue and keep it just simmering until perfectly tender. Lay the tongue on a hot dish, thicken the sauce with a little flour rolled in a lump of butter and pour it hot over the tongue. This is a very appetizing dish.

Preserved Cranberries

ALLOW three cupfuls of citron (cooked in water until tender) to two cupfuls of cranberries. Weigh and add an equal quantity of sugar and the juice of a lemon to each pound of fruit. Simmer until the fruit looks clear and rich, then seal. Half the weight of sugar may be used if a preserve not quite so rich is preferred.

Another way is to allow one cupful of large seeded raisins to two cupfuls of cranberries, one cupful of water and two cupfuls of sugar. Simmer to a rich preserve.

Cranberry and Apple Mound

COOK equal parts of cranberries and sliced apples together in a very little water, then press them through a sieve and measure. Add the juice of a lemon to each two cupfuls, and one and one half cupfuls of sugar for each lemon. Stir over the fire for a few minutes until the sugar is dissolved, then simmer slowly for five minutes. Take from the fire and let cool. Whisk the whites of two eggs to a stiff snow, stir in one cupful of powdered sugar and gradually whisk it into the cranberry and apple mixture. Beat all together until stiff, then turn into a wetted mold and serve very cold.

New Stocking Hint

A VERY fine invention for keeping stockings from dropping threads or running, as they do in these days of many garters, is to take the stockings when new and put a row of machine stitching just under the hem. Stretch the stocking while stitching.

Good Eggless Cake

ONE cupful of molasses, one half cupful of sugar, two heaping tablespoonfuls of shortening (lard or butter), one teaspoonful each of cinnamon, spice and soda dissolved in a little water. Stir in one half cupful of flour. Add one cupful of boiling water and enough flour to make thin batter. Bake in a slow oven.

Value of a Hot Salt-Bag

MANY people claim that a salt-bag is better than a hot-water bag, as one does not need to be afraid of it leaking or bursting. Make a square bag of flannel, fill it with salt, sew the opening carefully together, then cover the bag with cotton or linen cloth. The salt will hold the heat for a long time and also has some medicinal qualities. It can be heated in the oven, on top of the stove or wherever most convenient.

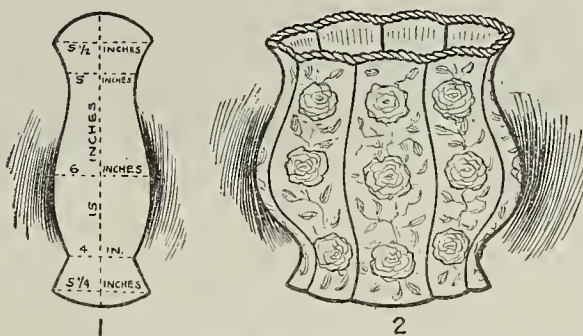
Attractive Jardiniere Basket

THIS jardiniere basket near the sewing-table makes such a useful receptacle for needlework, scraps of silk or waste paper. It is extremely pretty covered with flowered cretonne. One made from the dimensions diagrammed in illustration No. 1 makes a neat waste-paper basket, while one about half as large makes a very attractive little scrap-basket.

To make it, first cut eight panels of cardboard like the one shown in No. 1 and cover the outside with flowered goods. Cut the material about one fourth of an inch larger than the cardboard, and with needle and basting thread draw the material neatly over the edges of the board from the under side.

Cut and cover eight duplicate panels, using plain colored material for the inside. Place the two edges of the panels together and overcast around the entire edge.

Overcast the sections together, set the basket down on a piece of paper and mark around the bottom with a pencil. This will give the size and shape for the bottom. Then cut out two cardboards from the octagonal pattern and cover



Attractive Jardiniere Basket

same as panels. Fit in and join to the bottom by firmly overcasting it.

Now that the basket has been put together, the seams may be gone over with embroidery-silk. The basket may be embroidered, if one chooses, or trimmed quite elaborately with beads or cord.

Good to Remember

To remove mildew, wet the cloth in soft water and then rub on plenty of soap and salt, hang on the line in the sun and air for a day or two. This is an infallible recipe.

New boots which do not take a good polish should be rubbed over with a cut lemon before blacking. A cut raw potato will also serve the purpose, though lemon is preferable.

By using a teaspoonful of alum to a quart of water for starching calicos and gingham the color will keep bright and fresh, which is most desired on dresses that are washed often.

To clean rusty steel, first rub thoroughly with sweet-oil, leaving enough oil on the article to be cleaned to thoroughly soak into the rust. Leave till next day, and then rub with unslaked lime till all rust is removed.

Kitchen Helps

Don't boil fish (except salmon)—steam. Place a saucer inverted at bottom of saucepan and so raise the steamer. Cook in the steam and save the flavor and nourishment.

Don't cut bacon into rashers until you have boiled it one hour, then let it get cold and remove rind. Don't place in cold frying-pan. Have some bacon fat in it; when this is hot toss rashers in it.

A little household ammonia put in the water from time to time when cleaning glassware will make it very clear and almost as sparkling as cut glass. A perfectly clean linen towel should always be used to polish glassware.

Tomato-soup is so easily made and so generally liked that it is frequently resorted to for an unexpected guest, and occasionally the cook is much chagrined to find that the tomatoes and hot milk separate when poured together. This will never happen if one remembers to pour the hot milk into the hot tomatoes and not the tomatoes into the milk.

Ants in the pantries are a miserable pest and one that the most careful of housekeepers seem powerless to prevent in certain seasons. One of the best ways to get rid of them is to place fresh cucumber-peels around the places they infest. These must be fresh, as it is the odor that drives away ants; fresh peels night and morning for two or three days will often clear them out thoroughly.

Chicken-Pie

FOR chicken-pie, select a plump young fowl not over two years old at the most and weighing three and a half or four pounds. Place on its breast in enough boiling water to cover, and simmer until perfectly tender, but not reduced to strings. Let it stand overnight in the water in which it was boiled. This will give the meat a richer flavor than if taken out immediately after cooking. In the morning cut in pieces and lay aside for the pie. Add to the stock in which the chicken was cooked three tablespoonfuls of butter, and cook until smooth and thickened. Add salt and pepper to taste and a cupful of cream. If the chicken is very fat not so much butter will be required. Line the side of a deep round pan with pastry and place a small cup in the center to hold up the top crust. Turn in the chicken and cream, adding more cream if necessary, and seasoning the chicken with salt and pepper. Cover with a top crust gashed with a knife in two or three places to represent a leaf. Bake in a very hot oven to a golden brown.

To make the crust, sift together a pint of flour, two teaspoonfuls of baking-powder and a saltspoonful of salt. Add a good half cupful of lard or butter and chop lightly into the flour with as little handling as possible. Add ice-water, just enough to hold the rough mass of flour together; have the molding board thickly dusted with flour. Cut off a piece of the dough, throw flour over it without working at all and roll out thin. Line the sides of the pan. Take the rest and roll out a circular piece for the top. Brush over with milk and bake.

Candied Sweet Potatoes

SLICE raw potatoes, put a layer in a dish in which they may be served, sprinkle plentifully with sugar, butter and spices, add another, repeating until the dish is full, having the butter and sugar on top. Bake slowly until tender and brown, with a rich syrup all through. Serve hot.

About the House

Milk to soften water: Milk is an excellent substitute for soap or soda when washing crockery. It softens the water and prevents one's hands becoming grained and rough. Allow one teacupful to a gallon of water.

Use common soda to clean the black off the backs of kettles and pans. Apply it with a moist cloth and a moderate amount of "elbow grease" and it will quickly clean and brighten them, and keep them like new if used regularly.

Lemons are so healthful, and are useful in such a multitude of ways that the home should never be without them. Lemonade is the best of all drinks in fevers; without sugar it is a fine remedy for rheumatism and one of the safest of anti-fat cures; for a sick headache the juice of half a lemon in a cupful of strong black tea or coffee, without sugar, will often prove better than medicine.

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Winter Gloves and Mittens

With Directions for Knitting

By Helen Marvin

Man's Knitted Gloves

In these gloves the long wrist is an excellent feature. Knitting-worsted of two contrasting colors is used, for the model, a soft brown and a light gray being chosen. A skein of each is more than plenty. Use two pairs of No. 12 steel needles, and begin at the top of the wrist with the gray yarn. Cast twenty stitches on each of three needles, join in a round, and knit two-and-two ribbing for forty-five rounds. At the end of the last round increase one, for hereafter both colors will be used, for which an even number of stitches are required.

First Round of Hand—Knit two in gray, knit two in brown, and so continue, alternating throughout the row, until five stitches remain, which are for the beginning of the thumb. Work them with gray, and purl the first stitch, knit the next three, purl the last stitch.

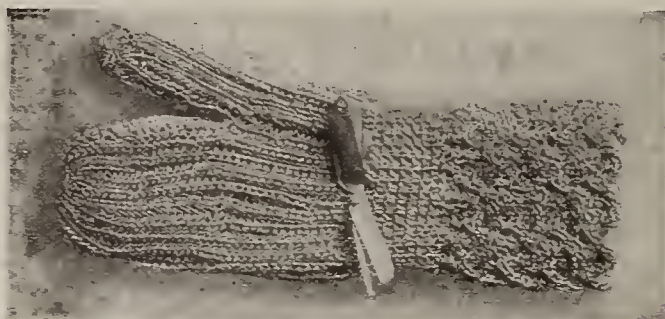


Illustration of the first-size baby mitten

Second Round—Work exactly like the first round.

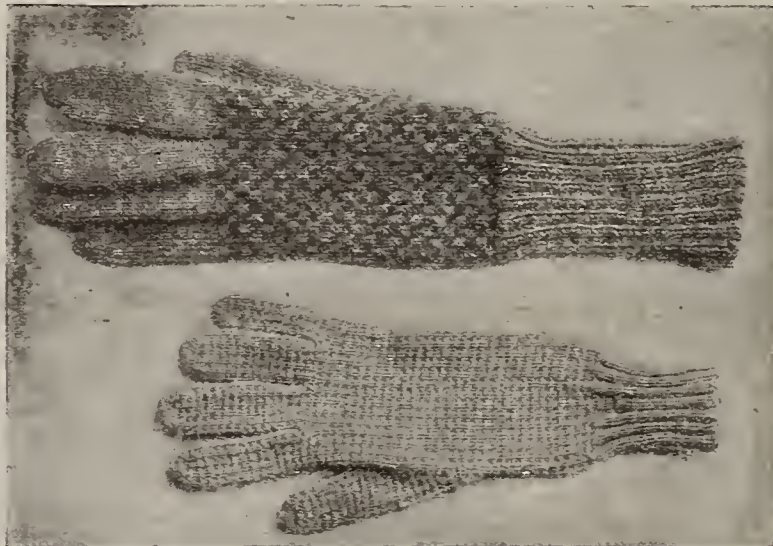
Third Round—Begin with brown. Knit two in brown, two in gray, throughout the row, thus bringing the brown on the gray blocks, the gray on the brown. Work the thumb stitches as before, of gray.

Fourth Round—Work like third round. The block pattern is continued in this way throughout the hand, the colors reversed after every second round, and no mention will be made of it hereafter. The color not in use always hangs inside the work to be taken up as needed, and the only care necessary is to see that the threads are not pulled up too tight.

The thumb is increased as follows:

Fifth Round—Knit two in first thumb stitch, knit three, knit two in last thumb stitch.

Increase in this way every fifth round until there are thirteen stitches between the increasings, or seventy-one stitches in all on the needles. Knit ten rounds without increasing. Run the fifteen thumb stitches onto a thread. Care should be taken when carrying the contrasting color



The top illustration shows a man's knitted glove; the lower one, a lady's glove of Saxony in a fine dice pattern

THE best materials for knitted gloves and mittens are knitting-worsted and Spanish yarn for the heavier variety, silk and the silk-wound wool known as Pompadour for the more dressy sort. While not manufactured for that purpose, expert knitters prefer purse-silk for knitting gloves, rather than the ordinary crochet-silk. The size of the needles depends entirely upon how the knitter works, ranging from No. 12 or 14, for heavy gloves, to Nos. 16, 18 and even 20 with extremely loose knitters, for fine wool and silk models.

Lady's Glove in a Fine Dice Pattern

For these gloves three skeins of three-fold Saxony and two pairs of No. 15 steel needles are needed. Cast on fifty-six stitches and rib in two-and-two for three inches for the wrist.

Knit the first two rounds of the hand plain, then knit one and purl one alternately throughout the third round. Repeat these three rounds until there are twenty-one rounds in all, then begin to widen for the thumb at the beginning of the next round as follows: Knit two in first stitch, knit one, knit two in third stitch. Knit the next round plain, as usual, and in the next round knit and purl alternately as before, knitting the two increased stitches, that the pattern throughout the round may not be upset. On the next round again increase, knitting two in the first stitch and two in the fifth stitch. Next round plain, then a round of knit one and purl one, alternately.

Continue in this way, increasing in every fourth round for the thumb, and bringing the increased stitches into pattern as quickly as possible, until there are twenty-two thumb stitches. Run these thumb stitches onto a thread. At the end of the last hand needle now cast on four stitches, arrange the stitches on three needles, putting the four new stitches, the two stitches which precede them, and the eight stitches which follow them, all on one needle. Work twenty-seven rounds according to pattern for the lower part of the hand.

For the first finger take the fourteen stitches placed on one needle, arrange them on two needles, and on a third needle cast on six stitches, making twenty stitches in all. Run the remainder of the hand stitches onto a cord, and for the first finger knit thirty-nine rounds.

Knit the remainder of the finger plain—that is, without the purl stitches. On the next round knit two together at each end of each needle. Knit two rounds plain and again knit two together at each end of each needle. Break off the thread, leaving an end long enough to be pulled through the remaining stitches. Draw up tight, and fasten off neatly on the wrong side of the glove.

For the second finger take eight stitches from the cord on the inside of the hand next to the first finger, cast on four stitches, take eight stitches from the cord on the outside of the hand next to the first finger, and pick up six stitches on the six cast on for the first finger, twenty-six stitches in all. Knit in pattern, on each of the first two rounds narrowing off two stitches of the six picked up on the first finger, so that, after the second round, twenty-two stitches remain. When forty-eight rounds in all have been made, narrow for the point as the first finger was narrowed off.

For the third finger pick up four stitches on the four cast on for the second finger, take eight stitches from the inside of the hand, cast on four stitches, and take eight stitches from the outside of the hand, twenty-four stitches in all. Narrow off the four stitches picked up on the second finger, knit thirty rounds, and finish as usual.

For the fourth finger pick up four stitches on the third finger and take the remaining stitches from the cord. On these eighteen stitches knit thirty-six rounds, and decrease.

Now take the thumb stitches on the needle, pick up four stitches on the four stitches cast on for the hand, on the first two rounds narrow off the extra stitches, knit thirty-six rounds, and decrease.

The glove just finished is for the left hand.

The right hand is made in the same way, excepting that the eight stitches for the lower part of the hand placed on the third needle precede the cast-on stitches instead of following them.

One round plain. Next round knit one, decrease, and repeat. Eight stitches will remain. Draw together, and fasten on the wrong side.

For the second finger take next seven stitches from the inside of the hand, cast three stitches onto another needle, take the last eight stitches from the thread, and pick up the four stitches that were cast on for the first finger, twenty-two stitches in all.

First round knit plain to the four stitches that were picked up, on them narrow twice, giving twenty stitches on the needles; then knit thirty-three rounds, and decrease, as with the first finger.

For the third finger take seven stitches from the inside of the hand, cast on two stitches, take the next eight stitches from the thread, pick up five stitches on the second finger, and knit one round plain, narrowing on the picked-up stitches as before, twenty stitches; then knit thirty rounds and decrease as before.

For the fourth finger take the remaining sixteen stitches and pick up four stitches on the third finger, knit first round, and narrow twice on the four stitches, eighteen stitches in all. Knit twenty-one rounds, then decrease.

For the thumb take up the fifteen stitches from the thread, pick up ten stitches on those cast on for the hand, and knit three rounds, narrowing at the beginning and end of the ten stitches that were picked up until there remain twenty stitches on the needles; knit

eighteen rounds and decrease as for the fingers, except that four plain rounds are knit after the first decreasing instead of three.

In making the second glove care must be taken to have the thumb at the opposite side of the hand and this is done by taking the first five thumb stitches at the beginning of the round instead of at the end.

The combination of colors here described may be changed to suit individual taste, but quiet, dark shades are to be preferred.

Two shades of dark gray, two shades of brown or dark blue and gray are good selections.

Infant's First-Size Silk Mittens

The mittens are knit on two needles, and require two spools of purse-silk and a pair of No. 18 steel knitting-needles. Cast on fifty-seven stitches and knit one row, purl one row, knit one row.

Fourth Row—Slip one, *over, knit one, knit two together, knit two together, knit one, over, knit one, and repeat from * to end of row.

Fifth Row—Purl.

Repeat the fourth and fifth rows two times, then the fourth row a third time. Now repeat from the beginning of the first row three times more, or forty rows in all. At end of last row narrow one stitch.

Now work fifteen rows in knit one, purl one ribbing for the wrist, then a row of holes for the ribbon, as follows: Purl one, *purl two together, over twice, purl two together, purl one, and repeat from * to end.

Next Row—Slip one, knit two, purl one, *knit four, purl one, and repeat from * to end.

The hand is in brioche as follows:

First Row—Over, slip one as though to purl, knit one, and repeat to end.

Second Row—Over, slip one, knit together the next stitch and the thread which lies over it, and repeat to end.

Repeat the second row until forty rows in brioche have been made, then run the first eight ribs in the row onto an extra needle. They are to complete the thumb.

On the remainder of the row knit thirty-six rows in brioche, for the hand.

Thirty-Seventh Row—Slip one, knit two together, *purl one, knit two together, and repeat from * to end.

Next Three Rows—Purl one and knit one throughout, then draw the silk through all the stitches and fasten firmly.

Go back to the thumb stitches, on them knit twenty-six rows in brioche, then finish as with the hand part.

Double the thumb and the hand part and sew the mitten in shape.

The second mitten is made exactly like the first one, excepting that the last eight ribs of the forty-first brioche row are taken for the thumb instead of the first eight ribs.

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ST. VALENTINE



ENTERTAINS



Invitations and Decorations

INVITATIONS for the February Fourteenth frolic could be issued "to meet Cupid," and though the little love god is himself invisible on the evening appointed, his spirit pervades the gathering, everywhere manifesting itself in games, decorations and refreshments.

Big hearts cut from scarlet or pink tissue paper and strung on cords of the same hue make charming festoons that cost little for the festive rooms. The pink or red ones can be alternated here and there by others made of gilt or silver paper. Or red or pink oriental lanterns may be swung at intervals upon the heart chains if these are obtainable at the time.

Of course, some new and amusing way of finding "Valentines" will be one of the first requisites of the evening. There are many ways in which the boys and girls can be paired off so as to create fun. One of these is

The Valentine Fishers

For this the boys go behind a big screen. If you haven't one sufficiently large, the kitchen clothes-horse can be paneled temporarily with tissue paper or pink paper muslin for the purpose. Each girl in the party is given a fishing-pole made of a long stick or dowel rod with a length of string or bébé ribbon attached to one end, and at the extremity of the "line" a piece of wire bent to form a large hook. The girls cast their lines over the screen and almost immediately there is a tremendous catch. After some manipulation of rod and line it is discovered that every fair fisher has caught a huge fish—hooked in every case through the coat lapel. The boy caught becomes the valentine of the fair angler who captured him. It might be amusing to bait the lines with peppermint drops instead of having the hooks, and let each fish seize upon one of the dainties behind the screen.

A Blindfold Game

Another way to decide the same important question which some may like to substitute for some reason for the foregoing is a pleasant blindfold game. A huge heart is drawn on a blackboard (or, if this cannot be easily secured, on a square of white cotton goods which is to be tacked up on the wall). The heart is divided up into as many sections as there are girls present and each section is marked with some girl's name. The boys are blindfolded and each one in turn is furnished with a golden arrow (whittled out of soft wood and gilded) and is sent to the heart with directions to pierce it with the arrow. To pierce means simply to touch it for the purposes of the game. The girl whose name is written in the section he pierces becomes his valentine.

Love Letters

One of the duties which devolves upon each pair of valentines will be to indite flowery love letters to each other. Paper and pencils are provided for this amusing little figure and fifteen minutes is allowed for writing the effusions. At the end of this time the different epistles are read aloud for the delectation of the company. The best letter of each sex wins a simple prize.

A merry scramble game will vary the contest. This requires as many hearts cut from paper or thin cardboard as there are boys in the company. On each heart write a familiar quotation concerning love, "Love me little, love me long," "The course of true love never did run smooth," "Tis better to have loved and lost, etc.," "Whoever loved that loved not at first sight?"

Or, if there is poetic talent in the family, original jingles or verses suitable to the day can be used instead. After writing the verses on them the hearts are cut into halves. When the game is to begin, the players close their eyes and each receives half a heart, consequently half a verse. When the signal is given all open their eyes and begin to search for halves to match those held. The matching halves need not always be held by opposite sexes, though when this is practical it is pretty, in view of the date, to have it so. The two persons first to put a heart together correctly draw for one of the home-made prizes described on this page a little further on.

Heart Contest

The valentines may also collaborate in a contest which consists in seeing who can in ten minutes write down the greatest number of words with the syllable "heart" or "hart" in them. Each two receive a card between them and the girl

By Mary Dawson

dictates the words while her partner writes them. He is not allowed to assist further. Such terms and names as heart's-ease, Richard Lionheart, faint heart, bleeding-heart, Bret Harte, Hartly Coleridge, Heart of Midlothian, heart of steel, are examples of the terms to be sought for. The list containing the greatest number of such terms not mentioned by other players wins prizes for the partners concerned in it.

Again Valentine Telegrams makes a pleasant pad-and-pencil contest which will help to pass one quarter of an hour. Here each couple receive between them a sheet of paper with the word "Valentine" written at the top of it. The object is for each boy and girl working together to form a telegraphic message of nine words, each word beginning with one of the letters of the word given. A hasty example of such a message will help to illustrate the plan:

"Valentines All Lovely. Exceedingly Novel. Thought Inscription Neat. Emily."

Turn About

Here is a good game to introduce at a Valentine party. It needs nothing that cannot be found at a moment's notice about any home and that is chiefly drawn from the family rag-bag. It is where the men perform feminine tasks, while the girls are wholly masculine in their occupations for the same length of time. A "sample search" makes a laughable stunt for the men. Each young man is given a scrap of cloth or goods of some kind and is sent to match it among a basketful of shreds and patches on the parlor table. When he has matched it, his troubles are by no means over. He is then given a pencil and paper and is asked to write down the name of the goods in question, the name of the color, to pronounce upon the quality and to suggest some way for making it up into a garment.

While the men are busy with this, the girls must roll umbrellas, sharpen pencils without "hacking" them and drive nails into strips of soft wood.

Inexpensive prizes may be given in each round, though this feature is not necessary to the fun of the competitions themselves.

Ringed Hearts

Lengths of heavy wire bent into heart shapes with pincers and covered with pink provide another game which is both pretty to look at and amusing. After bending the wire into place pad it lightly with raw cotton and cover with inch-wide strips of pink silicia (which is a good cheap substitute for ribbon) wound over and under. These rings are to be tossed over the old-fashioned grace-hoop stand. If this is not gettable have the handy man of the household imbed half of a broom handle upright in a solid block of wood, paste gilt or silver paper over the base, covering it neatly, and wind the staff with the silicia until completely hidden. Each couple, to play the game, receives the six heart-shaped rings and endeavors to catch them on the pole. Each one ringed counts one point and partners score together. A paper valentine can be the first prize, and a comic one the booby.

Love's Tangles

The only thing needed to prepare for this is a ball of heavy red or pink cord. Cut the cord into short pieces of about equal length and tie each into a tangle which will require a little time and patience to undo. Fill a basket with these snarled strands and call upon the players to see who can disentangle most in the given time. The basket or bowl should be placed in the center of the table, around which all sit. Valentines work together and the couple who have most straight strings to their credit will be most fortunate in love.

Separated Lovers

is a very jolly active game which will keep the fun in swing for half an hour and all wits on the jump, too. For it the entertainer should prepare in advance as many slips of paper or squares of cardboard as there will be guests. On the men's cards are written the names of



the celebrated lovers, Cupid, Romeo, Paolo, Antony, Tristan, Darby, Jack, Paul, Dante, Launcelot, while those of the girls give the appropriate loveresses, Psyche, Juliet, Francesca, Cleopatra, Isolde, Jill, Virginia, Beatrice, Guinevere. When the frolic is in order the entertainer pins to the back of each guest a slip of paper bearing a name of some lover appropriate to his or her sex. The wearer himself cannot see the name he wears, but must guess it from the pantomime indulged in by other people as he approaches and by what others say. Thus, while it is not allowed to address Jack of nursery-rhyme fame by his Christian name it is quite in order to ask him how his "crown" feels to-day, to pantomime a terrible fall down hill, etc. In accosting Juliet players drain imaginary philters and Guinevere is asked how she enjoyed King Arthur's tournament, etc. The object is for each lover to speedily join his lady love and especially to be the first of the group to meet his historical valentine.

Then it would be diverting to send the players one by one to the blackboard and see who could with the eyes shut or blindfolded draw the best "heart pierced by an arrow."

Decorations and Refreshments

The table for a valentine frolic can be made very attractive by means of hearts cut from crêpe or tissue paper which are tacked on the cloth just above the line of the chairs in the form of a running border. Have fluffy hearts made of several thicknesses of crinkled crêpe paper under the candlesticks, side dishes, etc. Place-cards could be penny valentines (the pretty, old-fashioned kind that are all loves and doves and lace paper) with the names of the different guests written on them. But place-cards, while they add to the attractiveness of the supper board, are not really necessary, especially for a small home frolic.

For the center piece borrow from the window garden the potted geranium which boasts most red blooms, and gather a frill of red crêpe paper around the earthen pot. Cut from bright red blotting-paper half a dozen hearts about three inches in depth and tie these in amid the dark green leaves. The effect will be most seasonable and pretty.

Instead of commonplace slices of bread with butter, two thin slices can be folded together, butter side in, and then stamped out with the heart-shaped cutter used for cookies. The same useful little tin article will also stamp pretty pink hearts out of cold boiled tongue or ham. Spread them separately on a meat-platter to show their full gorgeousness. These with coffee or milk and cake—perhaps home-made caramels—will make a dainty refreshment not too laborious to prepare or too expensive.

Making the Prizes

The prizes or souvenirs for a Valentine festivity add much to the fun, but dainty trifles to serve this purpose are easily whipped up in idle moments at home.

Dainty sachets can be made of two heart-shaped pieces of linen note or crêpe paper with between them a thin film of surgical cotton sprinkled with any sachet. After pasting the edges together the outside is decorated with a flower design in water-color or with a dainty figure clipped from some advertisement picture. Pretty blotters are made in five minutes by cutting out several thicknesses of a blotting-pad in heart or clover shape, covering with a shape in crêpe paper of dainty floral design and fastening with ribbon.

Or tiny heart-shaped pincushions or needle-books can be evoked from almost any scraps of red or pink goods found in the family scrap-bag—silk, satin or linen for choice, of course. Pen-wipers in cordate shape are easily done in the same way.

And who shall recount the possibilities of the country kitchen in the way of prizes when one's originality in the direction of the rag-bag has been exhausted! Heart-shaped cookies (the bigger, the better) coated heavily with sugar and bound together in pairs for successful competitors could not fail to stir a laugh. Pop-corn hearts, preferably pink, made in the same way as the familiar balls of our childhood are easy to do and appropriate to the occasion.

Something else, for the fun of which I can vouch, is a booby formed by wrapping up a tiny sugar or coconut kiss in a huge box and awarding it to the person who failed most lamentably—without explaining what will be found inside.



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Drawing by Susie Thompson, Age Fifteen,
Quitman, Missouri.
Verse by John Williams, Age Eleven.

If I Had a Hundred Dollars

First I would take a trip to New York City to see the big buildings and skyscrapers. I would visit Bronx Park, Coney Island and go for a sail up the Hudson to see West Point. Next I'd go to Washington and visit the capitol and the Navy Department and the White House, and the famous Washington monument. Would any of the other cousins like a trip like this?

EDWARD CLARK WEIGHT, Age Twelve,
Box 362, Bellwood, Pennsylvania.

I'll tell you what I'd do with a hundred dollars. I'd buy a cornet and learn how to play it and when I grew to be a man I could play in a good band. I would also buy a canoe and two shotguns, so that I could go on long trips with other boys. I'd go out in the river and paddle in the canoe from town to town, and I'd like to shoot the rapids in a canoe. I'd pitch my tent in some nice spot and when the weather was fine, I would go hunting and fishing and live just like the Indians until I grew tired.

FLOYD BAISDEN, Age Thirteen,
Athens, New York.



Royal Fidler, Age Thirteen, Salem, Ohio

The Runaway Boys

"It's just this way," said Detloe to his chum, "I broke dad's razor—a brand new one, too, and he's mad, just as mad as he can be. He said he'd lick me to-night, and when dad says a thing, he means it."

"Not a pleasant thing to look forward to, I must say," answered Herbert, "and dad's got it in for me, too, for something, I don't know what, and I'm tired of having everybody scold me. I guess—I guess I'll run away."

"How much money have you got?" asked Dets.

"Five cents. How much have you?"

"I've only got five myself, but—but that don't hurt, we can work."

"Shall we go?"

"Yes, let's."

"Well," said Dets, "I'll meet you at the corner at five o'clock. Get some blankets and something to eat."

At five o'clock two boys with pockets bulging suspiciously, and each carrying a bundle under his arm, made their way up the street toward the Zoo.

After a journey of several miles, the boys threw down their bundles and emptied their pockets with an air of relief. They made a fire and drew their blankets around them, and sat there in true Indian fashion. The rain, to their horror, began to fall, and put out their fire. Only two matches remained, and the boys were cold.

They found a dry place and struck one match. It struck on wet wood and was no good. Their only hope remained in the other. It flickered and went out.

"I'm cold," said Dets.

"Who isn't, you freak," shouted Herbert.

"And hungry, too," persuaded Dets.

"Aw, shut up. If I weren't nearly frozen to death I'd beat you good, for mentioning anything to eat."

"Well—well, I'm going home," wailed Dets, and he began picking up his things.

"Well, I guess I will, too, then, you baby," growled Herbert, but there was an unmistakable trace of relief in his voice.

LILLIAN TUCKER,
Age Fifteen,
Washington, D. C.

Bunny Cottontail

ONCE there was a little rabbit named Bunny who lived with his mother.

Now, Bunny was fond of running about by moonlight, which his mother did not like. She often said, "he would sometime suffer by it."

One night, as he was running along the lane near his home with Sally Jones, a man shot her, killing her instantly. Bunny ran home as fast as he could, but said nothing about Sally, for fear his mother would not let him go out any more.

But one day Peter Brown told him he knew where there were some nice cabbages. Bunny and Peter went night after night for the cabbage which they liked so well.

Soon Deacon Grey noticed that his cabbage was fast disappearing, so he told a neighbor boy that if he would set a trap and catch the "pesky creeter" he would



By a Cousin Who Forgot to Send Her Name and Address

give him a quarter. So the boy set the trap and covered it with cabbage-leaves.

That night when Peter and Bunny came after their supper of cabbage Bunny selected his and without knowing it he sat down on the trap, when "click," "click" it went, and off came his tail.

Bunny ran home as fast as he could, and his mother took a piece of cotton, dipped it in turpentine and put it on his sore back where his tail should have been.

After a few days his back seemed well, so his mother started to take off the cotton when, lo and behold, it had grown fast to the flesh.

Since then his descendants have always worn cotton tails, so now we know why rabbits are called Bunny Cottontails.

BLAIR RUDD, Age Thirteen,
Rolfe, Iowa.

What I Love to Hear

IN THE evening, in the winter,
When the fire is burning low,
I love to hear my grandpapa
Tell of long ago.

RACHEL T. EVES, Age Eleven,
Millville, Pennsylvania.



Some see strange faces in the moon
Which others cannot see,
But this one here which now appears
Will be the end of me.
Edna Rogers, Age Fourteen,
Springfield, Missouri.

The New Year

CHRISTMAS DAY has come and gone,
New Year's here at last,
With all its fun and jollity,
But it always goes so fast.

Oh, hear the merry sleigh-bells
A-ringing all the day,
The girls and boys have heard them
And are rushing out to play.

But the bells have ceased their tolling
And the sky is clear,
And every one in chorus shouts
"Hurrah for the New Year!"
CLARENCE STIGER, Age Twelve,
Fremont, Ohio.

Why Santa Made No Mistake

DOLLY and Tim were dear little twins,
Exactly alike were they;
And that was why their stockings were marked
By their mama on Christmas Day.

"This stocking is Molly's," she wrote on a card,
"And this one is Tim's on another.
Molly's a dear little six-year-old,
And Tim is her cunning twin brother."

And when down the chimney Old Santa came,
He read from the cards aright,
And that is why he didn't mix up
The twins' toys on Christmas night.
IVA GRAHAM, Age Fourteen,
Butler, Pennsylvania.

Prize-Winners in December 10th Contest

Clarence Stiger, age twelve, received a pocket-knife; Paul R. Loomis, age thirteen, a book, and Helen M. Squires, age sixteen, a bead purse.

The Letter-Box

DEAR COUSIN SALLY:—Although I have never written you, I have read your letters with much enjoyment. I live in Portland, Oregon, and am eleven years old. I came here from New York about three years ago. We lived fourteen miles from Niagara Falls, and I never saw it until the day before we came West.

We had such a fine time on our trip out here. There was a large party of us. We occupied the four middle seats of the car. My little sister and I thought that we were in Holland, because we counted over three hundred windmills apiece.

Here in Portland roses bloom all the year, and they are the most beautiful roses I have ever seen. Some people have hedges of roses along their yards. Good-by for this time. Your cousin,
EUNICE RANDALL, Portland, Oregon.

DEAR COUSIN SALLY:—We have taken the FARM AND FIRESIDE for a number of years, and I enjoy it very much. The stories are interesting and I like to read our cousins' letters. I am a girl fourteen years old and live on a big farm.

I love the country and would not like to live in the city. I have two sisters and one brother. I have been taking lessons on the violin for nearly two years. My oldest sister, who is nineteen, is counted a fine piano-player. We have played in public twice. I am in the eighth grade at school, and expect to pass the examination this spring. All the boys and girls that read my letters must be sure to send me some post-cards, and I will try to send you all post-cards of Lebanon, Ohio, the "Buckeye State," as they call it. Hoping to hear from you all soon, I remain your loving cousin,
MYRTLE UNICE PENCE,
R. R. No. 5, Box 95, Lebanon, Ohio.

DEAR COUSIN SALLY:—We have been taking FARM AND FIRESIDE for several years and I have always enjoyed your letters so much. I am delighted about our new club, and I inclose five cents for a button of membership. Please write and tell me all about it. I think this is a lovely idea. You are so kind and do so much to make us happy that I think we should do all we can to make the club a success. With love,
LOIS COOPER,
Winters, California.

DEAR COUSIN SALLY:—The good news is just grand. Any one would feel like shouting "Hurrah!" I am crazy to get my club button. Please send it to me and tell me the club's motto. I hope the club will grow and grow to be the largest of its kind in the United States, and I shall try to be a loyal member. I received many pretty cards from the cousins and readers of FARM AND FIRESIDE and enjoyed them very much.

I have not been feeling so well the last few days, but I am sure I will feel better soon. With love, your cousin,
LINNA NEAD, Lodi, Ohio.

Here are the names of a few of our club members should any of you boys and girls care to correspond.

Hardy Abbott, Windy, Amherst County, Virginia; Curtis Albert, age ten, Box 72, Warrensburg, Illinois; Ruth Albright, R. F. D. 3, Box 20, Greenville, Ohio; Lula E. Bailey, age fourteen, R. F. D. 3, Box 62, Thorndike, Maine; Gerald R. Ball, age eleven, Route 3, Box 88, Ashtabula, Ohio; Louise Beck, age ten, Route 2, Hicksville, New York; Laurin Comstock, Puente, California; Bessie Dermitt, age thirteen, Milwood, Kentucky.

Cousin Sally's Letter

DEAR GIRLS AND BOYS:—I am afraid you all think that I have forgotten about our new club, but indeed, I haven't. Our space has been so limited that I haven't much room to give up to it. Sometimes I am a little undecided about just what you like to see on your own page. I don't like to let a number go by without having a good story for you, and still, if I have the story every issue, it leaves very little space for your own work and letters. However, I thought this time I would devote the entire page to your work, but you must write and tell me if it pleased you, and if not, I would be very glad to receive any suggestions that you care to make. I want to please my little friends in every way possible, and of course I can't tell whether I am pleasing you unless you let me know of your likes and dislikes. Let us be frank with each other. We have been good friends so long, so why not write to me as you would to your real cousin?

Our club has grown tremendously in the past month, only I shall not be happy until all of my boys and girls have joined. Remember, every one, that you don't have to be a subscriber to FARM AND FIRESIDE to join our club. If you read the paper and are interested in it—that is enough, and the button costs only five cents.



Esther Crosby, Age Thirteen,
Pasadena, California

I have had many requests for games and parties, so beginning next month I shall print a game or two every issue. Please write soon and don't forget that I have a stack of club buttons already to send out to you.

COUSIN SALLY.



Miss Gould's Fashion Page



No. 1403—Misses' Shirt-Waist With Rever
Pattern cut for 12, 14 and 16 year sizes

LONG ago the wise woman learned that clothes often tell tales as to character. And of all the tale-bearing clothes none can equal the dresses a woman wears about the house in the morning.

Do you take pride in your home and are you willing to work yourself to always keep it its shining best? Then, let your clothes which you wear in the morning when you are busy about the home duties indicate these characteristics of yours most plainly. To-day there is no excuse for a woman not to look neatly and tastefully dressed in the morning. There are so many materials for her to choose from which launder to perfection and wear well, too. And there are so many designs especially created for clothes for morning wear that she need have no difficulty suiting her own individual preference.

Two-piece dresses are quite as much the vogue as the one-piece dress. Many of them, however, have the princess effect, though they consist of a separate waist and skirt. The separate belt made of ribbon or elastic belting in a contrasting shade from the dress is not as good style as it used to be, though with the shirt-waist suit the black belt will never be wholly discarded.



No. 1469—Boy's Blouse With Yoke

Pattern cut for 6, 8 and 10 year sizes. Quantity of material required for medium size, or 6 years, three yards of twenty-four-inch material, or two yards of thirty-six-inch material

For every-day knockabout wear this blouse can be made of outing flannel, which can be bought in many attractive patterns and also serviceable shades. Or make the blouse of white madras, cheviot or linen

No. 1315—Simplex Nursing Shirt-Waist

Pattern cut for 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 40 inch bust, four yards of twenty-four-inch material, or two and three fourths yards of thirty-six-inch material

No. 1316—Simplex Nursing Corset-Cover

Pattern cut for 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 40 inch bust, two yards of twenty-two-inch material, or one and one half yards of thirty-six-inch material



No. 1315—Simplex Nursing Shirt-Waist

No. 1316—Simplex Nursing Corset-Cover

No. 752—Box-Plaited Russian Dress and Knickerbockers

Cut in 2 and 4 year sizes

No. 1424—Empire Dress—High or Low Neck

Pattern cut for 32, 36, 40 and 44 inch bust measures. Material required for medium size, eleven and three fourths yards of twenty-two-inch material, or seven and one half yards of thirty-six-inch material, with seven eighths of a yard of all-over lace for yoke and undersleeves



No. 1424



No. 752

No. 1359—Tucked Shirt-Waist Buttoned at Side

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Material required for medium size, four and one fourth yards of twenty-two-inch material, or two and seven eighths yards of thirty-six-inch material

No. 1360—Buttoned-in-Front Skirt With Plaited Inset

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Material required for 26 inch waist, seven and one fourth yards of twenty-two-inch material, or four and three fourths yards of thirty-six-inch material



Nos. 1359 and 1360

Madison Square Patterns

FOR every design illustrated on this page, we will furnish a pattern for ten cents. Our big catalogue of Madison Square patterns will be found invaluable to the woman who makes her own clothes. We will send it to you if you inclose with your order ten cents in postage. Here is our latest liberal offer in regard to Madison Square patterns. This offer holds good up to January 31st. We will give one Madison Square pattern for only two yearly subscriptions to FARM AND FIRESIDE at regular price of thirty-five cents each. Your own subscription may be one of the two. We will send FARM AND FIRESIDE one year, new or renewal, and any one pattern for only forty cents. Send orders for patterns and for the pattern catalogue to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

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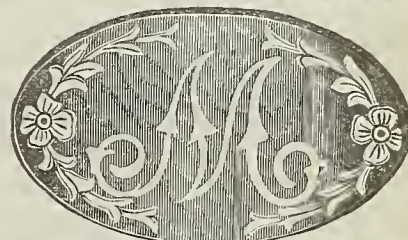
Buy from the manufacturer and save money. Handsomely made Boys Suits of closely woven, fancy Cheviot, the most serviceable material for boys' suits. Cut full and big and substantially tailored. Sizes 6 to 16. A suit at a saving of fully 40 per cent that will stand hard wear and still hold its shape and look nice.

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These pins are made of a solid piece of German Silver, heavy Satin Silver Finish, with raised bright polished letters and scroll. (Illustration exact size.)

They were manufactured by us to sell for 25 cents, but we have decided to use them as a leader to advertise our other goods. Simply send us your name and full address, also the initial you want, with 4 two-cent stamps to pay mailing and advt. expenses; we will send you one of these beautiful pins by return mail.

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If you would like to have running water in your home—in the kitchen—in the bathroom and toilet—in bedrooms, etc.—just like city homes—you can write an article that may win a cash prize.

Simply send us your name and address and say you are interested in this subject and we will send you by return mail, full particulars as to how you can win a prize, and give you valuable information that will enable you to get running water in your own home at very little cost.

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I would like to win a cash prize, and to have running water in my home.

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## WHEN DINNER COMES One Ought to Have a Good Appetite.

A good appetite is the best sauce. It goes a long way toward helping in the digestive process, and that is absolutely essential to health and strength.

Many persons have found that Grape-Nuts food is not only nourishing but is a great appetizer. Even children like the taste of it and grow strong and rosy from its use.

It is especially the food to make a weak stomach strong and create an appetite for dinner.

"I am 57 years old," writes a Tenn. grandmother, "and have had a weak stomach from childhood. By great care as to my diet I enjoyed a reasonable degree of health, but never found anything to equal Grape-Nuts as a standby.

"When I have no appetite for breakfast and just eat to keep up my strength. I take 4 teaspoonfuls of Grape-Nuts with good rich milk, and when dinner comes I am hungry. While if I go without any breakfast I never feel like eating dinner. Grape-Nuts for breakfast seems to make a healthy appetite for dinner.

"My little 13-months-old grandson had been very sick with stomach trouble during the past summer, and finally we put him on Grape-Nuts. Now he is growing plump and well. When asked if he wants his nurse or Grape-Nuts, he brightens up and points to the cupboard. He was no trouble to wean at all—thanks to Grape-Nuts." Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



## Salesmen Wanted

Traveling Salesmen earn from \$1,000 to \$25,000 a year and expenses. Over 600,000 employed in the United States and Canada. The demand for good Salesmen always exceeds the supply. We will teach you to be an expert by mail and our FREE EMPLOYMENT BUREAU will assist you to secure a good position. We receive calls for thousands of Salesmen and cannot supply the demand. Thousands of our graduates have secured good positions. Many who formerly earned \$25 to \$75 a month have since earned from \$100 to as high as \$1,000 a month and expenses. Thousands of good positions now open. If you want to secure one of them, or increase your earnings, our free book "A Knight of the Grip" will show you how. Write or call for it today. Address nearest office.

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The Roosevelt set contains twenty-four first-class post-cards printed from actual photographs in the true colors. This set contains, in addition to the photographs of Mr. Roosevelt and his party, the steamer Hamburg, scenes in the African jungle, the ways of hunting there and some of the fiercest and largest wild beasts. These post-cards would cost five cents each or more at any store.

### OUR GREAT OFFER

We will send you the complete set of 24 Roosevelt in Africa post-cards if you will send us 10 cents each for two 3 months' trial subscriptions to FARM AND FIRESIDE. The two trial subscriptions must be new subscriptions. Send the 20 cents for the two subscriptions in coin or stamps.

**Farm and Fireside**  
Springfield, Ohio

# Miss Gould's Dressmaking Lesson

## Clothes for Girls—Two Patterns for Ten Cents

IF YOU have a small daughter to dress who always needs new clothes and then more new clothes, you are going to be interested in the two practical little garments illustrated on this page. Both the patterns for the one-piece dress, which is very good looking from the fashion point of view, and the comfortable little kimono can be bought for just one ten-cent piece. As a rule, the price of each Madison Square pattern is ten cents, but here you can buy two patterns for the price usually paid for one.

This Set of Patterns for Girls, No. 1453, is cut in four sizes, for girls of 4, 6, 8 and 10 years. The patterns in each set are both cut in the same size. You cannot buy a kimono of one size and a dress of another size in the same set. The patterns may be ordered from the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

The pattern envelope contains ten pieces. Six of these pieces belong to the dress and four are for the kimono.

The pattern pieces for the dress are lettered as follows: The front V, the back T, the belt X, the sleeve K, the shield I and the collar L.

The pattern pieces for the kimono are lettered as follows: The front E, the back H, the trimming-band A and the sleeve F.

These letters are perforated through each piece of the pattern in order to designate the different parts and make it impossible for the amateur dressmaker to mistake one piece of the pattern for another. This method of lettering is particularly useful in this case where two different patterns are inclosed in the same envelope.

Before placing the pattern pieces on the material, smooth them out, carefully removing all the wrinkles from the tissue.

If the material in the dress is very soft you may be able to draw up the basting in the upper edge of the hem and full it in slightly all around. If, however, the material is wiry, it will be necessary to pin the little darts that form at irregular intervals and baste them flat before stitching the hem at the top. You may have to hem down these little darts very neatly, but they usually stay flat if well pressed.

Bind the front and neck edges of the dress with contrasting material. Lap the fronts of the dress, bringing the edge of the left front to the center line of large round perforations on the right front, and fasten invisibly in double-breasted style. Patent hooks and crochet eyes may be used for this purpose.

If a buttoned dress is preferred, face the edge of the right front and work buttonholes in one half inch from the edge.

Form the tucks in the sleeve by creasing on the lines of triangle perforations and stitch in three eighths of an inch from the edge of each crease. Close the inside seam of the sleeve as notched. Gather the sleeve at upper edge between double crosses.

When arranging the sleeve in the arms-eye always hold the sleeve toward you. Bring the seam in the sleeve to the notch in front of dress and place the notch in the top of sleeve at the shoulder seam. Pin securely at these two points. Then pin the plain part of the sleeve smoothly into the arms-eye.

Draw up the gathers to fit the remaining space. Distribute the fullness evenly and pin carefully before attempting to baste the sleeve in the arms-eye. Use plenty of pins in doing this part of the work, because the arranging of the sleeve correctly in the arms-eye is one of the most difficult parts of a dress and requires a great deal of care.

Join the collar to the shield as notched. Turn hems on



No. 1453—Set of Patterns for Girls—Dress and Kimono

These two patterns can be bought for one ten-cent piece. Both the pattern for the dress and the kimono are cut for 4, 6, 8 and 10 year sizes. Quantity of material required for the dress in medium size, or 8 years, three yards of thirty-six-inch material, or two and five eighths yards of forty-four-inch material, with one half yard of contrasting material for shield and trimming. Quantity of material required for kimono in medium size, or 8 years, three and five eighths yards of twenty-seven-inch material, or three yards of thirty-six-inch material, with one and one fourth yards of contrasting material for trimming-bands

In cutting out the dress, lay the edges of the back, the belt, the shield and the collar marked by triple crosses (XXX) on a lengthwise fold of the material. Place the fronts and the sleeves with the line of large round perforations in each lengthwise of the goods. Cut the right side of front like the pattern. Cut off the left front by center line of large round perforations.

In cutting out the kimono, place the edge of the back marked by triple crosses on a lengthwise fold of the material. Place the fronts, the sleeves and the trimming-band with the line of large round perforations in each lengthwise of the goods.

Be sure that all the notches are cut out and all the perforations are marked before removing the pieces of the pattern from the material.

### To Make the Dress

Form the box-plaits, back and front, by bringing the corresponding lines of triangle perforations together. Baste on these lines the entire length of the plaits, but only stitch along the bastings from the upper edge to the waistline. In a one-piece dress of this description the waistline is considerably lower than in a two-piece dress. You can find the exact spot where the stitching should stop by stretching a tape from the slash in the under-arm seam to the box-plaits, back and front.

After the plaits have been basted and stitched properly, open each plait out flat with the seam at the center of the plait on the under side. Be sure that the seam is exactly in the center, pinning it correctly at first. Then baste the plaits flat as near the edges as possible and press well.

Now form the inverted plaits in the under-arm seams, below the waist, by bringing the corresponding lines of triangle perforations together. Baste on these lines and press flat. When the plaits have all been made and pressed, join the back and fronts by corresponding notches.

Turn up the lower edge of the dress three eighths of an inch and baste flat. Then turn up a three-inch hem all around by the lines of large round perforations. Baste as near the edge as possible. Now place the dress flat on the table, wrong side up, and pin the hem to position. Use plenty of pins to hold it in place before attempting to baste at all. It is well to pin about half a yard and then baste that part securely before starting on the second half yard. Then the pins will not drop out.

the back of collar and shield by notches and fasten at the back. The shield is adjustable.

### To Make the Kimono

Shirr the fronts on the shoulders and the back at the neck, along the lines of square perforations.

Join the fronts and back by corresponding notches. Distribute the fullness in front evenly on the back shoulder, pin and then baste.

Turn up a three-inch hem at lower edge of kimono by the lines of large round perforations. Follow carefully the instructions given for turning up the hem on the dress.

Fold the trimming-band in the center by the line of large round perforations. Pin the under side of the band to the fronts by corresponding notches. Hold the kimono toward you while pinning on the band. Pin evenly from the notches to the lower edges and baste. Then pin from the notches to the shoulder seam and baste, being careful not to stretch the round corner in front. Now draw up the gathers at the back of the neck to fit the remaining space on the band, distribute the fullness, pin and baste securely. Baste the upper edge of the band smoothly over the front edges and then stitch through both sides of the band as near the edge as possible. Roll over the band on lines of perforations.

Join the inside seam of sleeve as notched. Gather the sleeve at the upper edge between double crosses and sew in the arms-eye as directed for the dress sleeve.

Finish the lower edge of the sleeve with a band of contrasting material like the front band. If you decide to make the sleeve band double, and the same width as the front band, cut off one and three fourths inches from the lower edge of the sleeve and join the band to the lower edge in just the same manner as you joined the band to the front.

The kimono may be lapped the width of the band and caught at the point of the collar roll with an invisible hook and eye or with a fancy frog.

Three-eighths-of-an-inch seam is allowed on all edges of these patterns, except at the shoulder and under-arm seams, where one inch is allowed, designated by lines of small round perforations.

As the kimono and the dress are both one-piece garments, all the fitting must be done either at the shoulders or under the arms. This additional inch is a safety outlet.



## The Curing of Meat

HAVE you ever tried sugar-curing your joints and sides? If not, commence now, and be progressive in this as in all things. Let me tell you of our way given by an old Quaker friend who had successfully used it for years.

Hang up the hams, shoulders and sides for ten days or longer. The longer they hang, the more tender they will be. Do not let them freeze if you can avoid it. Mix for each good-sized joint and side one teacupful of salt, one tablespoonful of brown sugar or New Orleans molasses (we prefer the molasses) and one ounce of saltpeter. Lay the meat in a clean, dry vessel. Heat the mixture and stir constantly until thoroughly mixed. Then proceed to rub it well into the meat. Rub especially hard around the bones and recesses. Repeat the process until all the mixture is used. The secret of success is in rubbing it thoroughly. It is well to wear a pair of canvas gloves to protect one's hands, as it is necessary to rub very hard. After this is done, let the meat lie for two or three days, then it must be kept for three weeks in brine strong enough to bear an egg. Take it out and soak for eight hours in cold water. Hang up to dry in a convenient place for a week or more. Then smoke with apple-wood and corn-cobs until it is a nice brown. We always hang ours with the hock down, as the juices are better retained in this way.

When ready to put away for the summer, rub well with powdered borax and cayenne pepper, and put in flour-sacks. Part of the sides we leave in the brine to make the good old-fashioned boiled dinners with beans, cabbage or turnips.

Now I want to tell you what we do with the heads. We render the jowls into lard. Then we take the upper part of the face and, after careful cleaning, soak it with the tongue for several days in salt-water. Then cook until tender enough to fall from the bone. This we use for mince-meat which we consider superior to that made with beef, although I always add beef-suet.

Here is my recipe for mince-meat which, according to tradition, was used by Martha Washington. Take two pounds of the head and tongue meat thoroughly chopped, two pounds of beef-suet, two pounds of dried currants, two pounds of raisins, one pound of citron, one half pound of candied lemon-peel, four pounds of apples, three pounds of sugar, two grated nutmegs, one fourth of an ounce of cloves, one half ounce of cinnamon, one fourth of an ounce of mace, one teaspoonful of salt, and the juice and rind of two oranges and two lemons. Cook all these together and can.

When apples are scarce and high priced I use a sweet pickle, making the syrup with sugar, vinegar, cinnamon and cloves, just as for sweet-pickled peaches or pears. I chop the apples fine and drop them into the boiling syrup and can. And again, if not having boiled cider, I make a syrup of equal parts of vinegar, sugar and spices to use for thinning my mince-meat.

CORA A. THOMPSON.

## Tattling or Telling

"I KNOW everything my children do when they are out of my sight," said a mother complacently. "From infancy I have taught them to tell on each other as soon as they get home, and in that way they know they had better be careful of their conduct."

Her neighbor gently remarked that she thought that encouraged tattling, and that she always tried to have each child tell for herself what had happened. The superior mother only sniffed at such an idea. It kept the youngsters within bounds, she insisted, to know that some one was watching them all the time.

But judging from the two families, the tattlers surely do not win much applause from those who know them well. It isn't their fault, poor children, that they must act as detectives and spies for their mother, but they are surely developing some unlovely traits in their lives. They quarrel and threaten and find fault with each other, and the mother is forever trying to settle petty disputes. It is most unpleasant to be in the home when the children return together, as they immediately begin a series of charges and countercharges that make the caller feel like running away from it all.

And the other mother has perfect children? Not by any means! They are decidedly human, but they are lovable and gentle to each other in spite of all their failings. Sometimes a child keeps a secret several days from the mother, but sooner or later the penitent little soul seeks a quiet hour and corner to sob the sin, certain that no one else will ever know of it, unless it is necessary in order to right a wrong.

So before you encourage tattling remember that it breaks up the little childish circle as nothing else can. If you expect the boys and girls to be good comrades all their lives, frown upon the petty tale-bearing that is a feature of so many discordant families. HILDA RICHMOND.



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Balfour Ker's great painting, "Her Mother's Voice," will be sent with every subscription to FARM AND FIRESIDE if sent within seven days of your receiving this copy.

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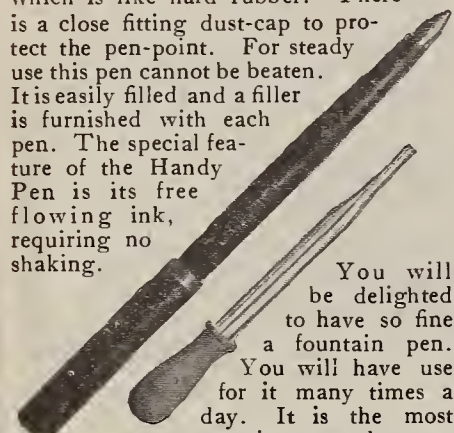
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### Our Offer

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Get them before the price goes up.

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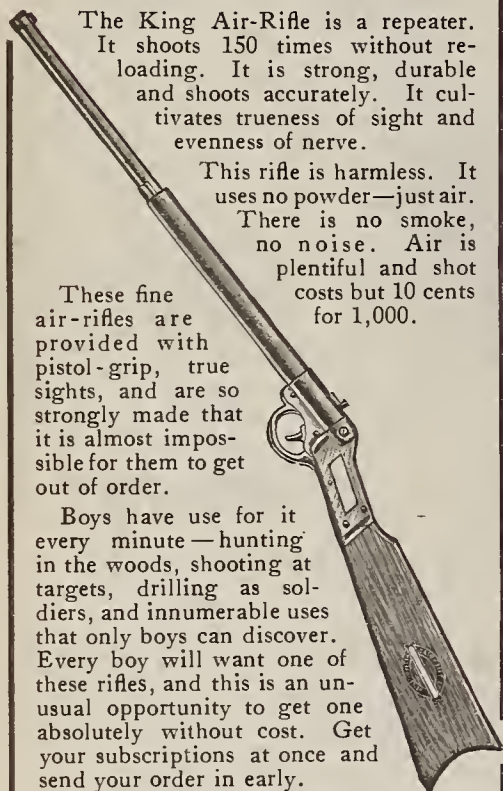
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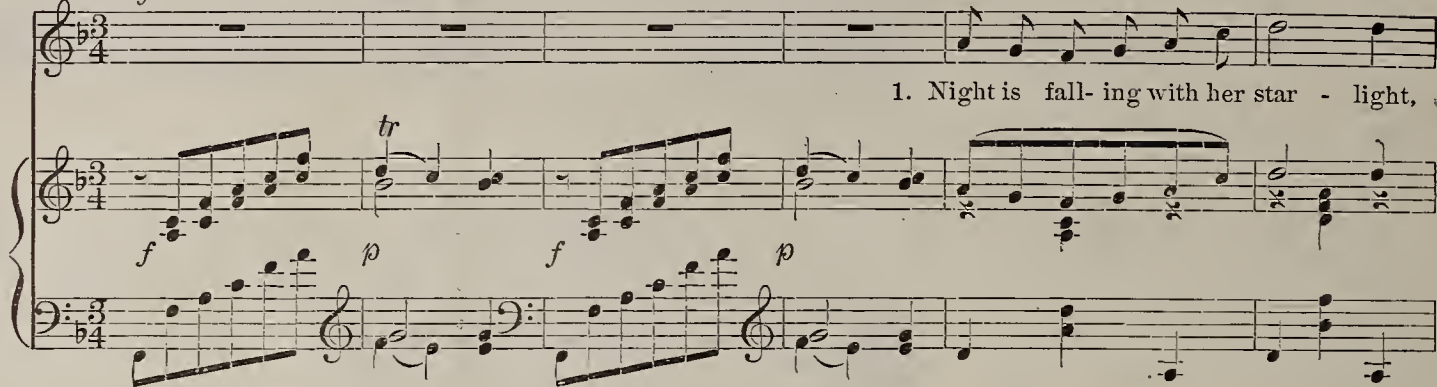
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## “STARLIGHT”

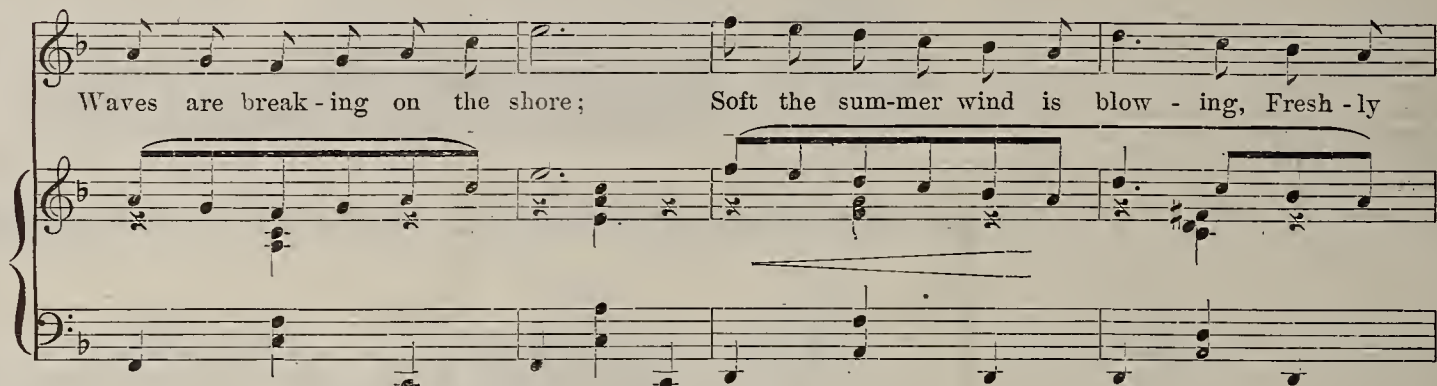
By Franz Lehar, Author of “The Merry Widow”

*Allegretto.*

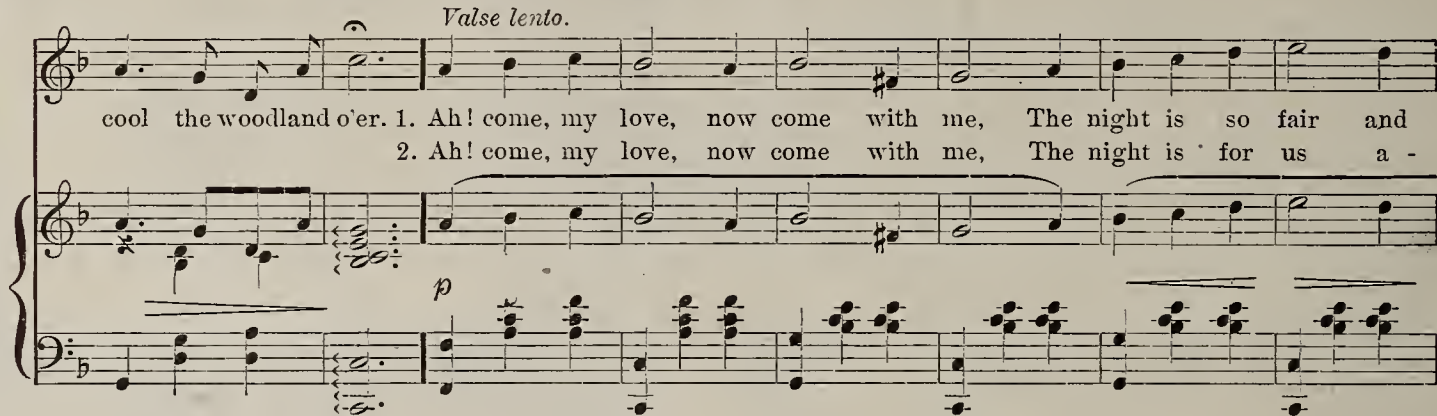
*Moderato.*



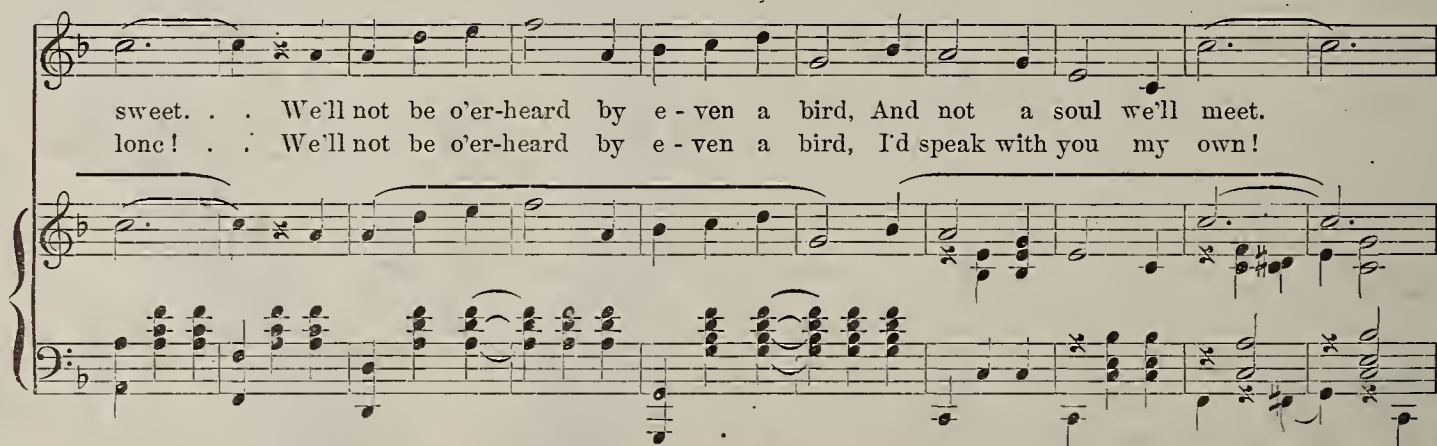
1. Night is fall- ing with her star - light,



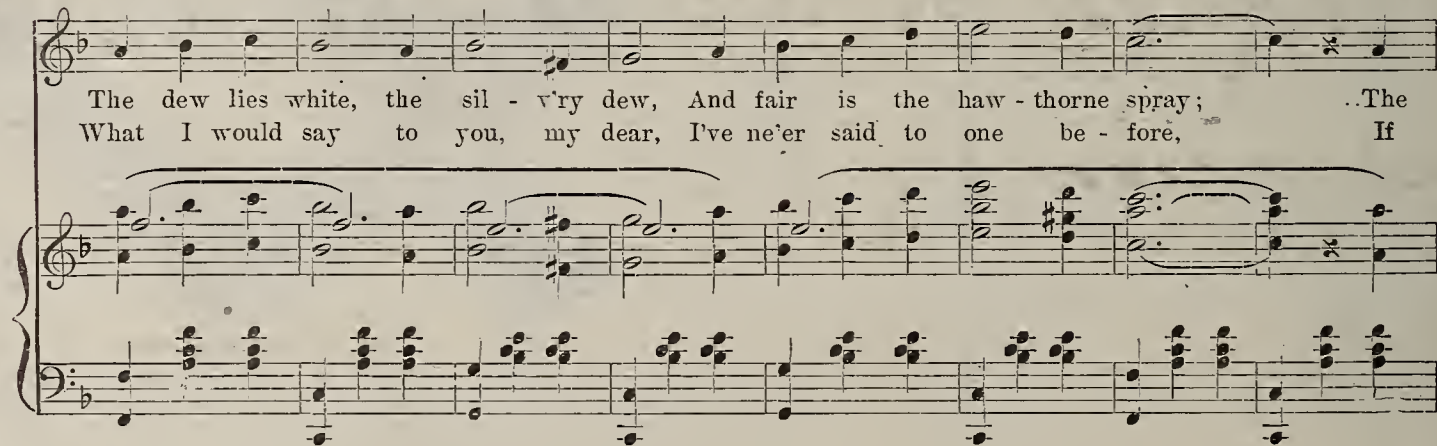
Waves are break - ing on the shore; Soft the sum-mer wind is blow - ing, Fresh - ly



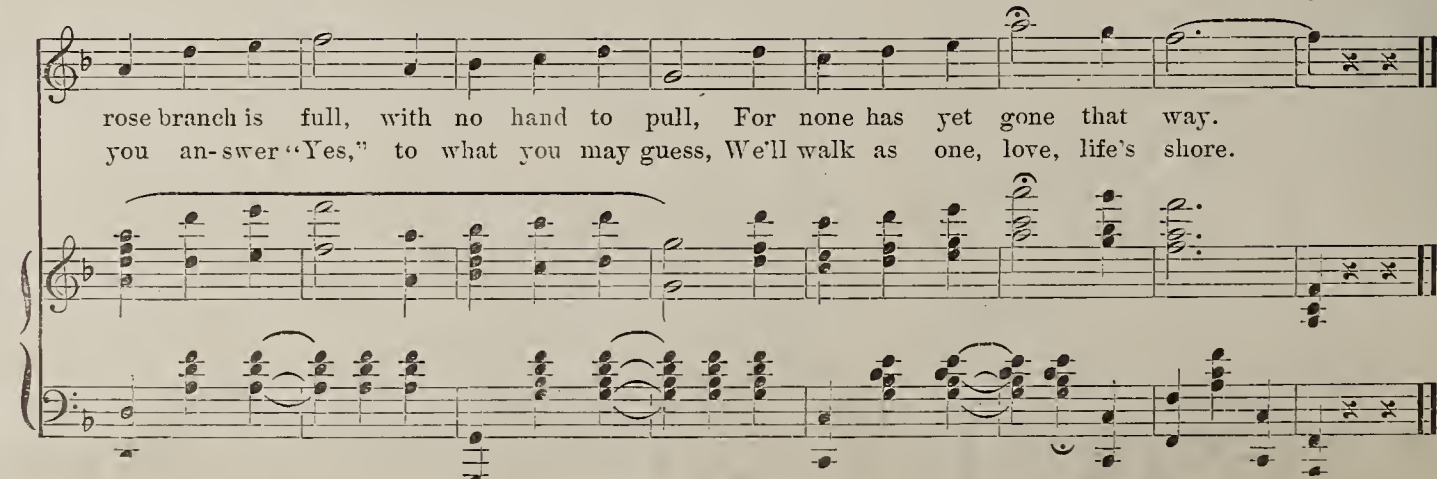
cool the woodland o'er. 1. Ah! come, my love, now come with me, The night is so fair and  
2. Ah! come, my love, now come with me, The night is for us a -



sweet. . . We'll not be o'er-heard by e - ven a bird, And not a soul we'll meet.  
lone! . . . We'll not be o'er-heard by e - ven a bird, I'd speak with you my own!



The dew lies white, the sil - v'ry dew, And fair is the haw - thorne spray; . . . The  
What I would say to you, my dear, I've ne'er said to one be - fore, . . . If



rose branch is full, with no hand to pull, For none has yet gone that way.  
you an-swer "Yes," to what you may guess, We'll walk as one, love, life's shore.



# SUNDAY READING

## When the Year is New

By Edgar L. Vincent

WHEN the year is new it seems natural to sow things, and among them a crop of plans for the days to come. How we do fling them around broadcast! Sometimes when we sow oats and plant corn, we are a bit economical as to the amount of seed we use.

"The reason that man never has a good crop," says gray-haired grandfather, "is because he is too stingy with his seed."

But it is never so with the great plans, the far-reaching resolutions and the mighty projects we scatter when time is just tightening its belt for the year-long race. We fairly litter the ground with these enthusiastic and well-outlined plans for the future.

And this is all right. Whoever made a beautiful machine without first having marked out on the white sheet of his mind every wheel, every axle, every valve? An old farmer friend of mine watched a young fellow as he stood whittling, and then passed this judgment on him.

"He never will do anything in the world. He doesn't make anything when he whittles!"

The fact was, he had no blue print in his soul.

It is a greater thing to think a great idea through to the end than it is to work that idea out with hammer and chisel. After the dream comes the brush and the canvas. Any one can take a saw and an adz and bring out the fancy of another who has laid the work out on paper before him. The hard part of it is to see with the eye of the mind just where every mortise should be dug, the right place for each tenon and the beauty of the completed structure before pencil ever touches paper.

The Brooklyn bridges have every one of them been built years before the first strand of wire ever was stretched. Who knows when the great Gunnison tunnel was made? Long, long ago a man thought it all out. Perhaps as he lay awake in the silence of the night. It was all done then. A few thousand dollars had to be expended in pushing the tunnel through the mountains, that was all. It was easy work compared with that done by the dreamer of the night watches.

And the world holds the man who makes the plan responsible.

One of the greatest feats of engineering ever undertaken came out wrong, just for the reason that a surveyor's pin was put down in the wrong place. Men began digging a tunnel on one side of a mountain in Europe and toiled on day after day, week after week and month after month to meet another force of

workmen coming toward them from the other side. When they reached the place where they should have met, they were far apart. It cost thousands on the back of thousands to undo that mistake made so long ago by the man who started wrong.

So it does make a difference what we farmer folks dream out now when the new year looks over the hills.

Tell me what you have planned out for the year and I will tell you very nearly what your success will be for the coming twelvemonth. Have you set it down somewhere that you will plow your fields better than ever before, that you will gather about you a better herd of cows, that you will care for everything with greater watchfulness than you did last year and that your farm work shall be done more nearly on time than it ever has been in the past? You have planned well. God will help you to carry out those plans.

In your dreaming have you seen where you might this year say things that will be more kind, more cheery, more helpful than any which came from your lips last year? Brush away the mist of tears that come from thinking how many mistakes you made in the days gone by and catch the ray of hope as it bursts through the clouds! Give full play to that gleam of sunshine and let it warm your heart into new endeavor!

But did any one ever come up to his expectation? Who ever did all he thought he would at the beginning of the year?

Ah, put that thought out of your mind! Dream on and keep on dreaming. Every day do the very best you can to make your dreams come true. It is best never to think of the things which hinder us from living at our best. Think rather of how nearly you have come to doing so. The inch by which you have failed will then become the foothold for the step higher to-morrow.

And while you are planning and thinking and hoping greater things for the morrow, do something to light the fire of hope in the heart of some one near you. The boys and the girls, the dear one who stands close beside you, the friend yonder who may never know what hope is unless you awaken it in his breast. Lift them all up by the passion of your determination to get nearer to the perfect manhood than you ever were before.

In the planting of the tree lies the prophecy of the harvest of golden fruit next fall. When we bury the bulb we see away on ahead the lovely flower that is to be.

So plan, dream, hope. By and by the fruitage will come.

### The Password

I HAVE joined all your clubs and your lodges,  
Have memorized passwords and signs,  
And used them to pull through tight places  
When luck seemed to run in hard lines;  
And I've known what it is to be humble  
And toil up the narrow defile;  
But I notice I pass by unchallenged  
When my bright face is framing a smile.

Some days when I looked wry and somber,  
Life seemed an embittering task,  
And I fancied the whole world against me,  
For my soul was obscured by a mask;  
I knew why the people dodged by me  
And rushed to get out of my sight,  
For men love to bask in the sunshine,  
But flee the dark face of the night.

The thoughts that are nearest and dearest  
Are those that are happy and bright,  
For the soul bids the memory waken  
The scenes that are bathed in sunlight;  
And the face of a dear one comes to me  
With smile so serene, bright and gay,  
That it scatters a joy and a blessing  
As if angels were passing that way.

Then I know that the Master who made us  
Believes in a Gospel of cheer,  
And beams from his throne on the pilgrim  
Who wipes from his brother a tear;  
And when the last trumpet is sounded  
I'll note as I near the Blest Isles  
The faces that greet me up yonder  
Are crowned with a halo of smiles.  
—Kenneth Bruce in the Christian Herald.

### For Leisure Moments

One never loses by doing good.  
Why not say and do the good things now.

The heart makes fewer mistakes than the head.

An ill temper detracts from the beauty of the soul.

We always hurt ourselves when we try to hurt others.

Try these: "A kind thought, a kind word, a kind deed."

"It is only in the larger and better life that there is enduring blessedness."

"Hope for the best, get ready for the worst and take whatever Providence sends."

"Most of the shades of life are produced by standing in our own sunshine." —Emerson.

"As the sun lightens the world, so let our loving kindness make bright this home of our habitation." —R. L. Stevenson.

"Sweet is the memory of departed friends. Like the mellow rays of the declining sun, it falls tenderly and yet steadily on the heart."

"There is nothing that a man thinks of, as he looks back, with any satisfaction, except some service to his fellow-man, some strengthening and helping a human soul." —Phillips Brooks.

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FARM AND FIRESIDE, Springfield, Ohio





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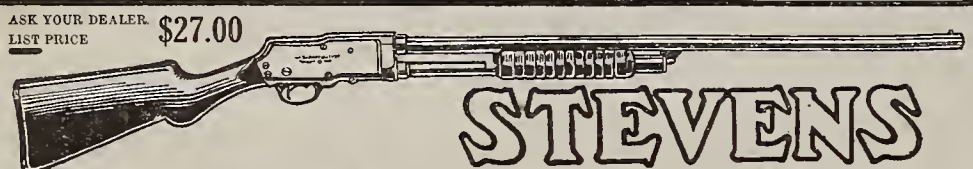
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By Marian Harland, Without Cost

**THIS** Cook Book is by the greatest cook in America. It contains hundreds of practical recipes. No home should be without it. It is not full of fancy dishes that nobody cares for, but tells how to make the hundreds of ordinary plain dishes better than you have ever made them before. Your cooking will delight the home folks when you get Marian Harland's Cook Book. The cover is of oil cloth and you can wash it off if it gets soiled.

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# A Little Nonsense

## Obeying the Doctor

**S**ALESMAN—"Shirt, sir. Will you have a negligée or a stiff bosom?"  
**CUSTOMER**—"Negligée, I guess. The doctor said I must avoid starched things."—Boston Transcript.

## Plain Spoken

**T**HE pastor of a small country flock was generally accounted a rather dull and prosy preacher. Returning from market one day with a small trout, he accosted a neighbor.  
"Good-morning, Jones," said the minister; "let me show you a fine trout; I'm using these for brain food."  
"Th-th-that's a nice little f-f-fish," was the reply, "but what you really n-n-need, elder, is a wh-wh-whale!"

## Transferred Their Affections

**A**MONG the domestic duties of a young husband in Indianapolis is the careful supervision of the toilets of his wife's two dogs, one a Great Dane and the other a by no means diminutive St. Bernard.  
"Oh, Marie," shouted hubby from the yard late one afternoon, "there's not a flea on the dogs now!"  
"How splendid!" shouted back Marie, "Not a single flea?"  
"No!" yelled Tom. "They're all on me!"—Lippincott's.

## Giving Full Credit

**T**HE minister came to call. George's mama happened to be out, so George took it upon himself to entertain the caller. He was displaying his various accomplishments and telling where he learned them. Finally he began turning somersaults. When he had finished, the minister asked, "And who taught you that, my son?"  
"Oh, mama," answered the little boy promptly.—The Delineator.

## Art

**P**OLLY gazed at her reflection in the pool beside the brook, saying, "If I had a dimple, how bewitching I would look."  
With a flash of inspiration I threw a pebble in.  
And it made the cutest dimple in the middle of her chin!—Life.

## Hard to Suit

**"T**HAT editor is certainly getting hard to suit," the author remarked in a discouraged voice, gazing sadly at a heavy envelope upon his table.  
"What is the matter?" asked the cheerful friend, who gets a regular salary.  
"Oh, he returns this story with the comment that it is too bald. Last week he wrote that he didn't care for stories of the hair-raising kind. What can you do with a man like that?"—Lippincott's

## What Troubled Pat

**A**N OLD Irish laborer walked into the luxurious studio of an artist and asked for money to obtain a meal, as he was too weak to walk.  
The artist gave him a quarter, and then, seeing possibilities for a sketch in the queer old fellow, said:  
"I'll give you half a dollar if you'll let me paint you."  
"Sure," said the man, "it's an easy way to make money, but—but I'm wondering how I'd get it off."—Lippincott's.



A Good Start

"Scuse me, I just found this fever. If I could only find a hat to put it on, I'd be all fixed."

## Modern

**M**OTHER, may I go out to fly?  
Oh, yes, but, dear, beware.  
Hang your shoes on the flying-machine,  
But don't go in the air.

## Physiological

**"E**FFIE," said Margie, who was laboriously spelling words from a first reader, "how can I tell which is a 'd' and which is a 'b'?"  
"Why," replied Effie wisely, "the 'd' has its tummy on its back."—Tid-Bits.

## How He Got Even

**A** TRAVELING man who stutters spent all afternoon in trying to sell a grouchy business man a bill of goods and was not very successful.  
As the salesman was locking up his grip he grouch was impolite enough to observe in the presence of his clerks: "You must find that impediment in your speech very inconvenient at times."



Conscience at Work

Aunt Agnes—"What an absurd idea. Of course cows don't eat children."  
Willie—"Don't very hungry cows sometimes eat awfully naughty children?"

"Oh, n-no," replied the salesman. "Every one has his peculiarity. S-stammering is mine. What's y-yours?"  
"I'm not aware that I have any," replied the merchant.  
"D-do you stir y-your coffee with your r-right hand?" asked the salesman.  
"Why, yes, of course," replied the merchant, a bit puzzled.  
"W-well," went on the salesman, "t-that's your p-peculiarity. Most people use a t-teaspoon."—Success Magazine.

## A Clear Definition

**L**EAH was having her first lessons in punctuation. On her return from school she explained to her brother that a period was a dot, and a comma was a period that had sprouted.—The Delineator.

**STUDIOUS YOUTH**—"Say, pa, who was the last man to discover the pole first?"

## Hired Help

**A**T CUMBERLAND, Maryland, the colored servants, as a rule, go to their own homes at night. The cook in the family of the Episcopalian clergyman not only does this, but of late has frequently arrived at the rectory too late to cook breakfast. Hence her mistress lately told her that for each breakfast missed there should be a reduction in her weekly wages. Dinah passively assented to this, but next day the mistress heard the maid next door say to her:  
"Pears to me you get to work mighty late."  
"I get to work when I gets ready," was the reply.  
"How you manage 'bout de breakfus?"  
"Oh, I pays de missus to cook de brekfus."—Harper's Monthly.

## Looking for a Name

**A** GENTLEMAN hurriedly entered a drug-store to find an address in the directory, but found a lady studying the book very intently. He waited as patiently as he could for a time, but she seemed no nearer the object of her search, and as time was limited, he finally ventured:  
"If you are in no great hurry, madam, would you be so kind as to allow me to glance in that book for just a moment?"  
"Oh, certainly," replied she, sweetly, as she relinquished it. "I was just looking it over to find a pretty name for baby."—Harper's Monthly.



# The Care of Window Plants

By W. R. Gilbert



Dust is the great enemy of the window plant and the only means to overcome it is periodic sponging of hard-foliaged things such as the Aspidistra and Indian Rubber Plant. With soft-leaved plants, like the Zonal Geranium or even the harder-leaved Ivy Geranium, which can hardly be manipulated without damage, a good washing overhead with the can and hose once a week outdoors will give them a cleansing refresher. Standing all plants out in the rain has but little effect unless one gets a regular tropical shower, as it often is just sufficient to mess the foliage by dampening the dust and in some cases sealing it on.

Trained Ivy Geraniums on a light wood trellis require constant tying in to form a perfect screen. The flowers, particularly those of the very floriferous pink Madame Grousse, continue to show freely with a little attention to pinching out the points of straggling growths and a little feeding. A little weak manure water applied twice weekly, after the ordinary watering is excellent, but not always expedient indoors. When strong plants of the Zonal Geranium begin to crowd their neighbors, some restriction by pinching out the points of the leading growths is necessary. But care should be taken to see that the truss of bloom is showing in the young growth; then the point should be pinched one joint above the truss. With crowded growth all damaged leaves and a few of the weaker shoots may be removed with advantage from the center of the plant.

## Don't Overdo Watering

Plants which stand in the more shaded and less exposed portions of the rooms demand extra care in watering. It is a bad practise to allow water to stand in the vases or saucers. This generally tells its own tale in yellowing and sickly foliage. Palms, Aspidistras and Maiden-Hair Ferns are all suitable plants for the more shaded positions and all do exceedingly well, provided they do not actually stand in direct drafts, and the simple ethics of watering are properly grasped. When a plant is dry it requires sufficient water to moisten the whole ball of soil, when it is not dry it does not require water, although the house gardener, unfortunately for the plant, is too often imbued with a vague notion that a little can do no harm. This dribbling habit is bound to do mischief in the end, however long-suffering is the plant and slow to resent the liberty taken with it. Palms and Kentia Belmoreana are admirable house plants and if really happy each frond should show an advance in size over the last frond made. If it does not accomplish this it is the fault of the owner, and in nine cases out of ten attributable to bad watering. The beauty of the Kentia under house cultivation is that quite fine specimens can be grown and kept in health in comparatively small pots, but the larger the plant and the smaller the pot the closer attention must

be given to its drink wants. A good plan is to stand it in a bucket of water for a quarter of an hour to get thoroughly wetted. If the air in the room is very dry during the growing season it is of advantage to pack a little damp moss between the pot and the vases in which it presumably stands. Should the palm be so well rooted as to require a larger pot, care must be taken not to disturb the roots when transferring it, for no plants are more impatient of this than Palms. Overpotting must be religiously avoided. Where larger pots are not wanted, with the advent of new growth a little top-dressing of fresh fibery loam will help.

## Potting Plants

On proper potting depends materially the success of not only house-plant culture but a good deal of greenhouse work. Potting is a general term applied to the first setting in a pot or the transfer from one size to another for providing additional rooting space. The requisites are pots of suitable size, materials for drainage and compost adapted to the wants of the plants operated on. Take a pot, place a large piece of broken potsherd over the hole in the bottom with its convex side downward, and on this add a layer of broken bricks or other porous substance, varying from half an inch to two inches in thickness, according to the size of the pot and the nature of the plant. On this place turfy or lumpy pieces of the soil, or compost (not sifted, but reduced by the hand to the size of pigeon-eggs), adding enough so that the plant will stand with the top of its attached mass of earth just below the level of the rim of the new pot.

The plant should next be attended to by gently inverting its pot in the hand and giving the edge a gentle tap, so as to remove the soil in one mass without disturbing the roots. Holding the plant in this position, displace the drainage material which had before been used and gently disengage the tips of the roots around the sides; then set it firmly in the new pot and fill firmly between the old mass of soil and the sides with compost. Finish the surface off evenly with the base of the stem about level with the rim and the soil near the rim a quarter to half an inch below it according to the size of the pot. It is important that the soil should be sufficiently dry when used to bear compression without becoming adhesive. The proper time for repotting is when each plant has filled just the soil about it with roots and extracted the nourishment from it, without having been left till the soil is exhausted or the roots matted or tangled. Whenever this state is reached (except in mid-winter) repot at once.

When space is limited, this increase in the size of pots should not be too rapid, say two sizes at each shifting, although this will not secure the same rapid growth which results from the adoption of larger pots. Free-growing plants, such as geraniums, will require more frequent shiftings than hard-wooded plants, for which an annual renewal is sufficient.

## Spring by Mail

ALong in February the seed catalogues begin to come to hand. They are about the first cheerful harbingers of spring. Their bright covers with prints of fat and luscious vegetables that fairly make the mouth water come floating into the farmer's home about a month before the first robin comes.

There is in the lay of the first robin an earnest of the whole coming season. It sings of the warm spring sunshine, of the melting snows and of the northward retreat of grim old Jack Frost; of cerulean skies and apple-blossoms; of the jingling of farm harness and of free-hearted plowboys; of the milkmaids singing in the gloaming; of flower-bordered pathways and two true hearts that beat as one; of wheat-fields and nesting-time and oh, so many more wonderful things. Out of the mysterious summerland in the far away comes the first robin, borne upon the chariots of the winds from the isles of the distant seas, with a touch of the rose upon its breast and a burthen of gladness upon its heart, and stands upon a twig just outside our windows as the sun glints the sky with the morning light and sings the knell of winter in the marseillaise of gentle spring.

So the seed catalogue comes floating in on the beneficent wings of the R. F. D. Right up to the door it comes in its generous manila overcoat. The snow is

knee-deep out of doors. The north wind whistles and the windows rattle. The tyranny of old Boreas is complete and you huddle closer to the hot-air register. The spirit of winter stares at you, a gaunt spectre, through the frosted window-panes, and a thrill plays up and down your spine.

Then comes the seed catalogue with tomatoes, and beans, and cucumbers, and peas, and blood-red beets in all the magnificent array of their own natural colors, laughing in your eyes from the front cover page; and cosmos, and asters, and zinnias, and nasturtiums in the magnificent beauty with which the touch of the summer sunshine decorates them, kissing you with their smiling lips from the back cover page.

A message from the world of summerland has come to you, and a change comes over you. You throw open the window to let in the fresh air, and somehow the sun shines more brightly than you thought and you wonder if it is not almost time for the first robin to come.

Blessed seed catalogue! It comes just in the nick of time. If it came early in January it would be stowed away behind the clock and forgotten. But just as winter is at its height and the stirrings of aspiration are the feeblest, it pops down upon our tables with its cheer of good things ahead, an inspiring and mighty welcome guest. M. G. RAMBO.

## From Bakery to Farm

Soda crackers are a long time on the road to the country store, and from there to the country home. But

## Unneeded Biscuit

—no matter how far they journey, never become travel worn. As you open their moisture proof protecting package you always find them not only store fresh, but bakery fresh—clean, crisp and whole.

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12 Birthstone and Flower Post-Cards

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Each depict in many colors the special jewel and the flower to be worn by every person born in that month. Each month's post-card also shows the special meaning and sentiment that is given to the jewel and the flower of that month. For instance—the January post-card depicts in gorgeous colors a beautiful Garnet set in a brooch, which signifies "Constancy."

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These are the most beautiful, unique and interesting post-cards ever made. Learn the mysteries of the natal month of yourself and your friends. Every post-card is printed in twelve colors on a silver back-ground. Send these cards to friends in their birth months. They are simply great—words cannot tell their beauty. You must see them yourself, and you can get them without cost.

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# Miss Selina Lue and the Soap-Box Babies

[CONTINUED FROM PAGE 26]

The boxing of the babies occupied the next few minutes and as at last Miss Selina Lue looked down at them safely and snugly asleep she said to Miss Cynthia softly:

"Ain't they sweet?" They's a heap a-going to happen to 'em as they go 'long, but ain't it a good thing to think how there's a guiding hand, child, a guiding hand? I can't bear to give Pattie up, but I know Mis' Tyne'll let me have her 'most all of every day. She is one of the sorter mothers that kinder fergits at times that children need more worrying over than puppies and kittens. But lands alive, the company will soon be here, and here we are a-talkin'. Don't everything look nice. Everybody's been stirring since daybreak." "Everything is lovely. Is there anything I could do now? You seem about ready. Is—is—the barn all decorated?" and Miss Cynthia cast longing glances toward the wide door and cool interior. Miss Selina Lue would have been glad to send her on an errand in that direction if she had thought of it at all.

"Yes, indeed," she answered, oblivious of the gentle hint, "finished along about ten o'clock. It's jest a greenhouse of vines and truck from across the river. But I want you to help me decide where the folks must set—and some other things." I thought I would let the children all go down to the car to meet her in two lines and sing one of them new hymns they learned at the gospel-tent as she comes up the hill."

"What time do you expect her?"

"Four o'clock, sharp. I asked Mr. Alan to take the in-car and meet her at the switch to 'scort her up. I thought it would please her, being as she is his old friend."

Miss Cynthia's color deepened a trifle, but she said, in a light, suspiciously light, tone: "And whom are you going to send for me, Miss Selina Lue?"

"Well, now, that's right; I oughter send for Mr. Si Bradford too, though you are sich home folks."

"You know he's a-running fer sheriff and he's a-going to make her a speech of welcome at the grocery door. I don't want her to think we're trying to put on too much style, but I felt like this entertainment was a kinder send-off fer Mr. Alan and we all don't want to spare no pains in showing how much we think of him. Do you think she will understand how we feel about it?"

"I am sure she will—appreciate your feeling in the matter," answered Miss Cynthia with a twinkle in her eye.

"I thought she would. And how do you think it will do to ask Mis' Si Bradford to set next to her at the refreshments? You know Mis' Si is kinder proud on 'count of having a blue tea-pot handed down from her pa's mother, though it's cracked, and a chair she used to set in, only one leg's gone. I know she's sorter slow and heavy-like, but she thinks a heap of herself and I feel it's kind ter let everybody set their

own price, so I humors her; I know Mr. Si will admire to come fer you, and I will send him fer you prompt."

"Oh, no, I think as it is so early I will just run down by myself and then—perhaps Mr.—Mr. Si will take me home if it's late."

"Oh, yes, him or Mr. Alan! Well, good-by till I see you. It is most time fer us all to dress."

And again, Miss Cynthia threw herself with abandon into the process of the toilet and again the result was—delightful.

"Why, honey-bunch, I am afraid the folks will all want to eat you instead of the refreshments—you look so good—don't she, Mr. Alan?" was Miss Selina Lue's greeting to her from the grocery door. Mr. Kent stood beside her and was the personification of fresh, cool, elegant, afternoon-tea correctness. Miss Selina Lue judged rightly that the expression dawning in Miss Cynthia's eyes was that of admiration, for before she had received an answer to her question to Mr. Kent about the vision of loveliness at the foot of the steps, she broke out afresh with her delightful exclamations:

"Now, ain't he jest too fine, Miss Cynthia? Them white flannels is plumb beautiful before they shrinks, and after that they makes good rags to rub with in cases of rhumatiz and sich."

"Miss Selina Lue," said Mr. Alan, his eyes dancing with delight, "I think you asked me a question first; I claim first answer. I do—I do feel hungry when I look at her. I feel that I could without provocation eat—"

"Miss Selina Lue," broke in Miss Cynthia hastily, "I am getting alarmed; and though Mr. Kent looks cool and afternoon-tea-y—and grand, I begin to think he may be more ferocious than he looks. Lions—are—"

"Run, run! Mr. Alan, for that's the car to catch Miss Evelyn on the switch—she oughter be here now in five minutes. Come on, Bennie, and git all the children in line! Tell everybody to come here to the grocery steps and listen to the speech first thing—there's Mr. Bradford now." Miss Selina Lue met her guests at the foot of the steps and welcomed them with enthusiasm. Miss Cynthia helped do the honors and shared in the general excitement.

"Howdy, everybody!" said Miss Selina Lue. "We sure make a fine show. She is going to shake hands right here with us all and then go and see the pictures before it gits dark, and then come the refreshments. Miss Cynthia, you hadn't oughter hold Blossom, but you jest will do it and muss your dress. Now, Ethel Maud, hold Clemmie careful till her mother gits her, and I will carry the twins as we go down to meet her. I feel like the babies oughter see it all—you can't begin on manners fer entertainments too young."

And so the honored guest found them, an exotic-colored aggregation of palpitating ex-

citement in gala attire and more gala humor. It often happens in the world that the coin of human intercourse stamped entertainment does not buy for tenderer or barterer much in the way of real pleasure, but on the bluff it was otherwise. Joy, real, effervescent, sparkling joy filled every cup to the brim and ran over.

The bluff took Miss Evelyn to its arms and caressed: I admired and jubilated over her to its heart's content. She was greeted in flowery phrases by Mr. Si Bradford, whose oratorical acrobatic feats were as astonishing as the triple hand springs that Bennie Dobbs turned in her path at every possible opportunity. It was well that her fund of enthusiasm was adequate to supply long drafts. Miss Cynthia stood by and watched her with awed pride and delight. She enthused over young Jim Peters in stiff and uncomfortable attire, and his rosy, blushing young mother in soft blue muslin. She admired all six Tyneses and was especially interested in Ethel Maud's little barked nose. She expressed starvation at the aroma of Mrs. Kinney's pies and listened with rapt attention to Luella recite a choice piece in nine verses.

"My, my!" said Miss Selina Lue in an aside to Mr. Alan, who had taken his stand by her at the grocery door just one step below that on which stood Miss Cynthia with Blossom in her arms. "Ain't they having a good time? I do hate to break it up by asking her to look at pictures, but Mr. Leeks is a-going to play her a tune on his meggyphone, and as soon as it's over I am going to send her right up to the barn and keep the crowd down here to help me set out the refreshments. S'posen, Miss Cynthia, you run on up there now so as to be there when Mr. Alan gits her up. I am sorry you won't let me take Blossom away from you, though I know if I try there will be a hollering, and it do seem a pity to mix any tears in this party."

"Well, Mr. Alan, you'd better go 'long with 'em and hand her up the ladder to Miss Cynthia. Then hurry back so you will be here when the piece is finished. Now he's tuning up!"

And obedient to instructions and the exigencies of the case, Mr. Alan did hurry—only one minute—was—long. Miss Cynthia knelt on the loft floor and reached down for the Blossom he held to her from the ladder and her face was the hue of the roses and her eyes were twin stars—and tender. A moment she held the baby to her breast and smiled down at him over the golden head—and as Mr. Alan ran for the grocery to the last strains of "Won't you come home, Bill Bailey?" as executed by Mr. Leeks, his heart lent wings to his feet.

The hour the four of them spent in the studio with the pictures was delightful, for Evelyn looked into Miss Cynthia's eyes for a moment, then kissed her on both cheeks and—was merciful and charming.

The pictures so absorbed all three—nay, all four, for from the first time Blossom had been transported to the studio she had gazed at them with wide-eyed wonder that had overjoyed the artist—that when Miss Selina Lue's beaming face appeared above the ladder they could scarcely realize how the time had flown.

"Well, well, what a nice time you all do seem to be having! Such a day as never was on the bluff before, and everybody so happy! I declare, Mr. Alan have smiled so much since morning that he's gitting fat. They ain't nobody said a cross word or slapped a child since sun-up. But come down, everybody, for the crowd has sung and laughed itself hungry and I can't hold 'em back no longer. Miss Cynthia, honey, did you notice the wreath of larkspur Mr. Alan and Bennie Dobbs tied around Charity's neck? Don't she look dressy and proud? And she's kinder switching her tail perky. Trust a woman, if she is jest a cow, to skitter some in finery. But I'll go on, and you follow as fast as you can."

The refreshments were appreciated to their limit, and so enticing were their appearance and flavor that Miss Evelyn first chose "cross-barred," then accepted "open-faced," and finally begged for "kivered," to Mrs. Kinney's manifest delight. In fact, when the tale was told, there remained only one of each persuasion, which Miss Selina Lue had packed in a basket to send to Mrs. Jackson Page.

"You walk on up the hill with the girls, Mr. Alan, and carry the basket," said Miss Selina Lue as they began after unnumbered farewells to take their departure. "Come back often, Miss Evelyn. You've got friends here on the bluff as'll stand to you the rest of your life."

And so Mr. Kent appeared for the first time before Mrs. Jackson Page bearing a gift of rare spices; and though at first welcomed icily, after an hour's conversation in which transpired, by her adroit maneuvering, his parentage, and the social and financial standing thereof, he was invited most cordially to dine.

"Law, Miss Selina Lue, where can Mr. Alan be?" questioned Mrs. Kinney, as she sat for a few minutes on the grocery steps in the moonlight. "It's after ten o'clock, and he ain't never showed up since he took them girls home. Co'ting oughtn't to be gave in sich hunks; broken doses is better."

"Well, now, Mis' Kinney, honey," answered Miss Selina Lue dreamily, "you know folks git married fer a long time, and it do seem like co'ting oughter go on quite a spell! 'fore they goes through the door from which they ain't no returning unless by death—or divorce, which is wusser. And then, too, ain't it jest one of the best times they is to life. So I fer one say let it be drawn out into fine strands, though strong as number forty cotton."

[TO BE CONTINUED]

## The Mystery of Hillcrest

[CONTINUED FROM PAGE 24]

which commanded a view of the southwest drive. How long she knelt there, watching, she could not say. She did not feel afraid, but a strange sense of impending peril stole over her, and she caught herself listening with every nerve strained and tense.

It must have been after nine before she caught the sound of a motor-car. It stopped at the west turn of the drive, and a figure, which she knew to be Doctor Buell's, stepped out. For half an hour afterward there were mysterious happenings at Hillcrest. Lights passed from the tower rooms to those beneath Mrs. Sturges. Nan caught the sound of smothered voices on the balcony, and heard distinctly the doctor's low, steady tones directing some operation there.

"Go slowly, Tunga," he said. "The rope is too small for the weight. Steady now, higher, and I can get hold and help you."

She heard Mrs. Sturges speaking in half sobs, but the doctor was urging her to keep her courage and presence of mind. They were dragging something over the balcony rail, something that was a dead weight, and then the doctor and Tunga lifted it into Mrs. Sturges' own apartments. For nearly an hour everything was still, but about half-past ten the doctor left, and Nan, still watching, knew that he had taken the body of the Japanese butler, Kato, with him, dead or alive, she knew not.

"Have you seen Tunga Din yet, Miss Calvert?" Arline asked the next morning at breakfast. "I'm almost afraid of him. Sometimes I think even mama is, too."

Before that first week of her stay at Hillcrest had elapsed. Nan thought the same. Over the entire household a strange settled gloom seemed to rest, and the very personification of the shadow was the East Indian. Nan caught several glimpses of him on her way through the halls. He was

fully six feet tall and powerfully built, sinewy and supple as a tiger. He always wore a turban of closely-folded yellow silk about his dark head, and a plain sort of cassock of the same fitted him from neck to feet. He refused to meet her gaze in passing, but looked directly before him with a curiously rapt expression, as if he saw her not.

One day while she and Arline were taking a ride with Mrs. Sturges in the latter's runabout along the river front, they saw the form of Tunga Din emerge for a minute, and stand on the small parapet that wound about the tower windows.

"Look, mama!" cried Arline eagerly. "Isn't Tunga like one of those men in Turkey who stand out on the minarets and call the hour for prayer. He does that every night, Mrs. Daggett says."

Mrs. Sturges made no reply, but when the housekeeper came up to the south wing that night to superintend their supper, she spoke her mind to Nan.

"You must be teaching the child to hold her tongue, Miss Calvert," she said in a whisper. "Sūta, her ears are like a phonograph, the way they grab every word you let fall. Her mother gave me strict orders never to talk before her of that heathen, Tunga Din, and she must have heard me say something to Villette. If you speak a word in this house, it's heard all over. That Villette is another of them. She's as bad as the chap in yellow. I think they're both after Mrs. Sturges' money. And ain't Peter Forbes the old villain, though? He's trying to get both his hands on the Sturges' fortune. But the will only left him trustee and guardian for the little one till she's of age."

"The will? I thought Mr. Sturges died before Arline was born over in India."

"Oh, bless you, not at all. He died when Arline was nearly a year old."

"But the doctor says he was killed in India by a man-eating tiger—"

Mrs. Daggett jungled her bunch of keys and smiled knowingly.

"The doctor's spinning fairy tales to you. Mr. Sturges was found poisoned in his bungalow over in that heathen country. And do you want to know who was his best friend over there and the only one with him when he was found dead. Mr. Tunga Din."

"Did Tunga Din kill papa, Daggett?" asked a wistful voice behind them, in the narrow hall between the nursery and Nan's rooms.

"God bless us, if she hasn't heard me," gasped Mrs. Daggett. "Darling, don't you go and tell your mother, now, on poor old Daggett, will you, and I'll give you something fine and dandy when you come to my rooms next time."

The telephone-bell at their left rang lightly. It was the first time Nan had heard it since her arrival. She took down the receiver and called "hello." A man's voice answered.

"Can I speak to Mrs. Sturges, please?"

"Mrs. Sturges is not here," said Nan.

"Where is she, then? She has not left the house, and she is not in the house apparently."

"Who are you?" asked Nan.

"This is Mr. Forbes speaking."

"Well, she is not here."

"Wait a moment." Nan placed her hand over the mouth, and turned to the housekeeper, but she had rushed to the window with Arline. Outside there came the steady "chug-chug" of an automobile.

But suddenly a curious muffled ring came from the telephone. Distinctly, but far, far away, came the sound of Mrs. Sturges' voice in wild appeal. Nan could just catch fragments of half-choked pleading, then one quick call into the telephone not in her voice, but in the Hindoo's unmistakable tone.

"Help!"

The door was ajar, left so negligently by Mrs. Daggett. With one backward glance, Nan ran from the room, straight along the corridor to the turn and up a few steps toward the west tower chamber. Some one was behind her, but she never paused. The hall to the west tower ran along the full width of the house, then came a flight of stairs to a closed door. Toward this Nan sped, hearing plainly now the calls of Mrs. Sturges for help within. A voice behind her made her falter an instant.

"Nan!" It was Doctor Buell's tone, imperative and alarmed. "Wait. Don't open that door, for God's sake!"

But she had already reached it, and tugged at it with all her strength. It was like her own, fastened from the outside with a strong spring lock, but she succeeded in turning it, just as the doctor's strong fingers closed over her own.

"I must help her," she begged. "Please let me go."

Without even stopping to answer, the doctor lifted her bodily from the door and pushed his way in. It slammed behind him. And suddenly the frantic clamor within ceased. Nell stood with her back to the door, breathless, horrified. Up the stairs came a man of about fifty, and she knew it must be Peter Forbes.

"What outrage is this?" he gasped. "What is the matter?"

Before Nan could reply, the door behind opened. Doctor Buell faced her, composed, but tense with excitement.

"Keep your nerve, Nan, and come in here," he said. "Mr. Forbes, go back downstairs and hold your tongue before the servants. There has been an accident."

He pushed Nan gently ahead into a darkened passage and shut the door of mystery after them both.

[CONCLUDED IN NEXT ISSUE]



# 5 Grand Rose-Plants Without Cost

To obtain these offers your order must be mailed within one week from your receipt of this paper

FARM AND FIRESIDE readers have come to consider our Annual Flower Offers as an institution. One reader writes that the roses she received from us fifteen years ago are still flourishing. Never before have we made our readers such an offer as this: Five superb special varieties of Roses, all sturdy bushes, all different, with the positive guarantee that they

## Will Bloom This Season of 1910

These rose-bushes have been grown especially for FARM AND FIRESIDE by one of the greatest nurseries in America, and are offered by FARM AND FIRESIDE without cost to its friends in order to add 100,000 new readers. FARM AND FIRESIDE guarantees that every rose-plant is a valuable variety and of good, sturdy stock. The roses and other great Flower Collections here offered, will be shipped at once if you so request, or in the spring at planting-time. State when you want your flowers sent. Here are the roses:

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1. **Climbing Meteor**—The brightest colored of all roses and a persistent bloomer.
2. **Mrs. Ben R. Cant**—Deep red and one of the hardiest and finest varieties.
3. **Mlle. Franzisca Kruger**—Deep yellow—unique and distinct from all others.
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5. **Etoile de Lyon**—One of the hardiest and most beautiful yellow tea roses.

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FARM and FIRESIDE will send the collection of Five Roses or any other ONE Collection of flowers named below, carefully packed, postage or expressage prepaid, as follows:

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Subscription Price (for the next week) One Year, 35 Cents; or Two-Year Subscription, to one address, 50 Cents.

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1. **Prosperity**—The largest Carnation ever offered.
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4. **Harlowarden**—A bright dazzling crimson. The largest and best of its color.
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1. **Black Hawk**—Dark velvety crimson. Extremely fine grown in sprays.
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3. **Millicent Richardson**—A beautiful rosy velvet. A monster in size.
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5. **Percy Plumridge**—A very large Japanese incurved variety; of buttercup yellow.
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**Special**—Every subscription sent to FARM AND FIRESIDE in connection with any offer on this page during the next week, will include a copy of Balfour Ker's painting, "Her Mother's Voice."

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## The CORNING EGG-BOOK

(entitled "\$6.41 per Hen per Year") tells HOW these two men did it. Not theories, but *facts*; not air-castles, not expectations, but *methods*, tested and proved by experience. It tells how they found a market eager to get choice eggs at high prices. It tells how they learned to meet that demand with an *unfailing supply*, in winter as in summer. It tells of their problems and failures, and how they overcame them and won SUCCESS. It gives photographic pictures of their plant, plans of their buildings, etc.

YOU probably cannot take up egg-farming as a profession; but if you keep even a few chickens you should know the latest developments of poultry science. Many features of the Corning's system are new and startling. Old theories, hitherto accepted by everybody, are discarded. Every chicken owner owes it to himself and his flock to keep up with the procession.

—Here are some of the things that the CORNING EGG-BOOK tells:—

The troubles of great hotels in getting reliable eggs.  
The prices paid for CORNING eggs throughout the year.  
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How to get the most eggs when other people get none.  
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How to grow juicy broilers in nine weeks.  
How to mix the food that makes the most eggs.

How to prevent the drafts that kill chickens.  
How to save 97 per cent. of the young chicks.  
Why and how they make the hens scratch for food.  
Why they send hens to roost with full crops.  
How to make hens attend strictly to business.  
Why they raise only white-shelled sterile eggs.  
How to have May chicks laying eggs in October.

The Corning Egg-Book is sold in combination with the

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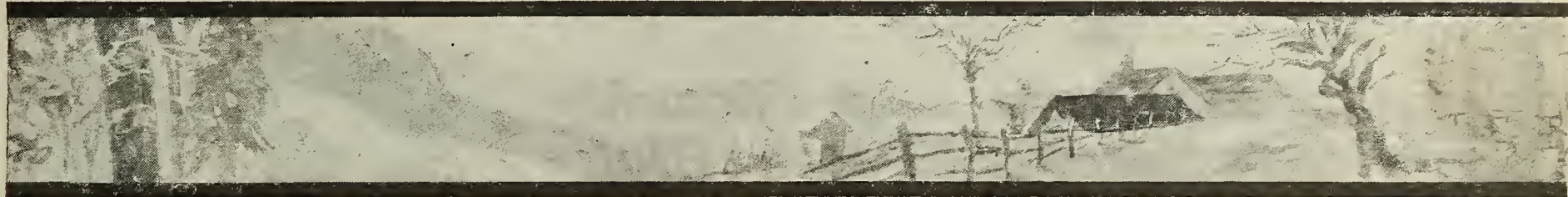
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# FARM<sup>AND</sup> FIRESIDE

THE NATIONAL FARM PAPER



ESTABLISHED  
1877

FEBRUARY 10  
1910







**H. G. PHELPS**  
Manufacturer of  
Split Hickory Buggies



**Write for this Free Book. Contains the Best News of 1910 for Vehicle Buyers**

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**I** SHOW you this letter from the publishers of this paper to make you feel doubly sure about where to buy any style of vehicle you may need this Spring. I've been selling direct from my factory to you Farm and Fireside readers for nine years. In that time I've sold thousands of buggies, vehicles of all kinds, and saved every customer from \$26.50 to \$40. And here's a

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H. C. Phelps.

**FARM AND FIRESIDE.**  
THE CROWELL PUBLISHING COMPANY.  
11 EAST 24TH STREET.  
NEW YORK

January 3rd, 1910.

ADVERTISING DEPARTMENT

Mr. H. C. Phelps, President,  
Ohio Carriage Manufacturing Company,  
Columbus, Ohio.

Dear Mr. Phelps:

In reply to your letter of December 31st, we are glad to testify that you have been an advertiser in Farm and Fireside for many years and during that time we have never been called upon by any of our subscribers to refund them any money on account of any transaction with you.

During all this period our guarantee has appeared at the top of our editorial page, as it does today. Under this guarantee we would be asked to refund money to a subscriber whose transactions with you had not been satisfactory. That we have not been so asked speaks for itself.

We are glad to recommend any of our subscribers doing business with you in the belief that they will have entire satisfaction and get their money's worth.

Very truly yours,

*G. J. Herbert*  
Advertising Manager,  
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GHP/X

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**H. G. Phelps, President**

**The Ohio Carriage Manufacturing Co.**

Station 27, Columbus, Ohio





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Springfield, Ohio, February 10, 1910

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SEMI-MONTHLY

## Beginning With Poultry

By Fred Grundy

The average poultry article addressed to the ambitious beginner either dazzles him with Arabian Nights' visions of fancy profits, or gives him a false start by filling him with notions of advanced methods that succeed only in the hands of men of experience. Enthusiasm and inexperience are a risky combination. We think it is going to be of inestimable value to our readers with poultry-raising hankerings to have the common-sense of the question presented by Mr. Grundy, herewith.—EDITOR.

**D**URING the past month upward of twenty inquiries about going into the poultry business have come to my desk. I have not answered these, simply because I have not had time to do so. I am not a professional writer, as readers of FARM AND FIRESIDE have long ago discovered. I do not have to earn my living with a pen. It is already made. But I have not yet taken to the bench, a jack-knife and reminiscences, and never will. There is nothing so interesting to me as experimenting with crops of different sorts, and especially with fowls. I have learned that there are great possibilities along these lines to the intelligent experimenter, and the farther I go, the more there is to learn.

For instance, the past year I tried to see what I could actually make a small lot of fowls pay in the way of profit with a very ordinary outfit of appliances in the way of coops, yards, etc. The result was somewhat of a surprise. I felt something like a man in Missouri who last year laid off a quarter of an acre of good land and started in to make it produce twenty-five bushels of corn. When he husked it he found that he had forty-one bushels. He could scarcely believe his eyes, and he got two of his neighbors to measure the land again, and then to weigh the corn.

When I found that my pullets had actually paid nine dollars and twenty-six cents each I was more than astonished, and I went over my figures more than a dozen times to see if I was not mistaken. Many good poultrymen feel delighted if they can make their birds pay two dollars to two dollars and fifty cents each. What if they could nearly quadruple that amount?

But inexperienced poultrymen, or those who are wedded to fads and fancies, cannot expect to reach anywhere near those figures. They simply show the possibilities in store for the poultryman who will not be satisfied with the ordinary, or usual, profits, but is determined to get all there is to be had.

There are a number of so-called "systems" advertised that promise all the way from a living to a fortune from poultry-raising. The figures given in the advertisements of these "systems" are made startling chiefly to draw attention to the advertisement, and the "system" or "secret" is exploited to secure subscribers for some paper that people could not otherwise be induced to take. The ordinary poultry-raiser is not benefited an atom by being told how ten hens of an ultra-fancy breed laid a thousand dollars' worth of eggs in one season, when those eggs were sold for fifteen to twenty-five dollars a sitting.

I began at the very bottom of the poultry business, and stayed there a long time before making any advance. I stayed there mainly because I was full of theories gathered from the writings of dreamers and people who wrote poultry articles to see their names in print. I was led to believe that I needed this machine, and that implement, and this feed and that medicine, and this breed and that variety in order to succeed, and I went in debt for things I had to work out by the day to pay for. After I got rid of all the theories and all the romance and tommyrot, and set to work and learned the business in a practical manner, I soon got into a position to make some money, and it came faster and easier as the years went by.

I do not believe it is possible for any one without experience to make a living from poultry right from the start. But it is possible for one to learn enough in one season to begin making money the next. To learn, he must have a few hens, a few appliances and time to study. If he is diligent and sharp-eyed he

will soon learn to tell at a glance whether his hens and chicks are all right and doing well. At a great state fair a man came to me and said there was a nice lot of fancy chicks in the incubator department which he could get at a reasonable price, and he wanted me to look at them. They were in a brooder and run, and in a moment I saw that more than half were in the first stage of "bowel disease," and, as most of the others certainly were infected, I reported that the chances were they would all be dead within a week. He bought them against my advice, and succeeded in raising just one.

This incident shows that it is absolutely necessary to have some practical experience in order to succeed, and for that reason I always advise beginners to begin small—with a few fowls—and build up as they learn. With a few fowls the losses will be small, and one will have time to study his birds and what is best for them under all conditions. I have known dozens of people to get enthused over reading some catalogue, throw up a good position and dive into poultry-raising in a wholesale way, and go broke in one season. I have known dozens of others to start in with a few fowls as a side line, and in two or three years to give their whole time to poultry and make much more than

a fair-sized town, bought five acres and began doing any kind of work he could get to do with his team. His wife had learned poultry-raising pretty well on the farm, and she decided to take up the business and see what she could do in helping to make a living. She began with the thirty hens she brought from the farm, and in five years was doing a business amounting to nearly seven hundred dollars a year. The last time I heard from them her husband had sold one of his horses, bought a delivery-wagon and they were making more clear money a year than they ever made on their farm. They were selling guaranteed fresh eggs and dressed fowls to people in the town.

The question as to whether it is best for the beginner to go in for egg-production or fowls for market is one of the most important. So far as my experience indicated, the exclusive egg business could probably be made to pay well if one could secure enough customers who would be willing to pay extra high prices for guaranteed eggs, but I am satisfied that a mixed business of producing both eggs and market poultry is the most profitable for the great majority of poultry-raisers. I made most of my money producing what are termed "springs," chickens that weigh from two to four pounds each. To make the largest profit out of these they must be well cared for and well fed right from the start, and sold before rapid growth and increase in weight ceases or is checked.

In producing both eggs and market poultry the poultryman has two strings to his bow. With right management he will have eggs to sell every day in the year, and can profitably turn off chickens from May to December. One quiet little fellow who keeps about eighty hens on his two acres told me not long ago that he managed to have a nice bunch of stuff to sell (eggs or chickens, or both) every week in the year. "That's the way to make money," said he. "Have it flowing your way in a steady stream. The stream may not be large, but it is unfailing if you manage right. The dimes and quarters and dollars make a nice pile at the end of the year."

I always made it a point to buy at first hand all the feed that I did not grow. In buying at first hand—from the grower—one saves from fifty to two hundred per cent. The poultryman who buys his feed in packages, often with a few cheap drugs mixed with it, is not going to be a poultryman long. Only a few days ago I received a letter from a beginner who complained much about the high price of feed. He said he was paying two and a half cents a pound for corn. I happened to have a newspaper that is published in

his town, and noted that the price dealers were paying farmers for corn was sixty-five cents a bushel. I marked it and sent it to him. I have bought hundreds of bushels of corn, wheat and oats from farmers, and by paying five cents a bushel more than dealers were giving got all I wanted without any difficulty. The poultryman who is afraid to buy in quantities while the grain is being marketed will soon be out of business.

When pullets are looking large and plump and are not laying an egg, and hens are molting and loafing about, the poultryman often thinks it is simply throwing good feed away to give it to them. But then is the time to feed without stint. The reason the birds are not laying is because they have not stored any egg material in their systems while they have been growing a coat of feathers. As soon as they become "charged" they will begin to produce eggs. If one withholds the feed at this time, because it looks like wasting it, the eggs will not be forthcoming.

There are lots of things the bright beginner will learn quickly as he goes along, and for that reason it is best to begin with not more than thirty hens. In producing eggs for market he should remember that no male birds should be kept with the layers. They should only be turned in with the layers about ten days before the eggs are desired for hatching. As soon as one has secured enough eggs for this purpose the males should be removed. Unfertilized eggs will keep much better than those fertilized. I have

[CONCLUDED ON PAGE 7]



The Right Equipment for the Beginner—A Few Good Fowls and Plain Fixings

a good living. If one starts wrong he is soon bankrupt. If he starts right, and gives his fowls the attention they should have, he is sure to make a success of it if he sticks to it.

To make a good start one needs very few appliances—very little machinery. In fact, the less he buys, the better he is off. There are a whole lot of luxuries in the way of poultry machinery that he does not need at all, for if he had them he would not know how to manage them properly, and they would not only disappoint him, but also probably disgust him with the whole business and throw him entirely out. He can indulge in them after he gets well started.

An enthusiastic beginner once said to me: "You told me to start with a few hens, and raise a few chicks and putter along that way. I'm not that kind. Things have got to move when I take hold of them! I've got out over three hundred chicks already, and will soon double that number. How's that for business?"

"Pretty good," said I. "Let me know how many you have three weeks from now."

He avoided me, but his boy told me he had just forty-six. All the rest were buried. He added: "Pa's pretty mad about it, and I guess he's going to quit!" And he did.

A farmer bought a quarter section of land, making but a small payment down, and giving a mortgage for the balance. After wrestling with that mortgage nine years he gave up the struggle, moved to the suburb of



# Sisal Against Manila

A Twine War That Will Ease the Price for the Farmer—By John Snure

CHANGES of the utmost importance to the farmer are taking place in the binder-twine situation. It will be well for every farmer who has use for any considerable quantity of binder-twine to give attention to this question.

Charges are heard in some quarters that a movement is on foot to effect a corner in sisal fiber and thus force up the price of binder-twine made of this material. Investigation of this charge does not disclose that it is well founded. The experts in fibers in the Department of Agriculture who keep in close touch with the situation assert they know nothing about it. It seems at least certain that if any such movement is on, the consummation of it is to be considerably in the future. The binder-twine prices for 1910 will not be higher than those for last season. In some cases they will be slightly lower, as indicated by the opening prices.

Nor does it appear probable in the existing situation with respect to binder-twine fibers that prices are likely to be advanced in the near future. A war of no small magnitude is being waged between powerful twine-manufacturing interests. It is likely to continue indefinitely. The effect of this struggle, so far as can now be perceived, is likely to be beneficial to the users of binder-twine and to insure them good twine at prices no higher than they have been in the habit of paying.

This war just referred to is between sisal and manila. The chief figures in it are the International Harvester Company, which is a large manufacturer of sisal twine and of "Standard" twine, and the Plymouth Cordage Company of Plymouth, Massachusetts, which is a heavy manufacturer of manila. The Plymouth company is engaged in a great campaign of education to bring about the more extensive use of manila. The International Harvester Company last May executed a coup in sisal fiber and purchased over

two hundred thousand bales in Mexico, for delivery in different dates in the year 1910. This action caused a general advance in fibers for a time. It gave rise to many reports that the sisal market was being cornered. Undoubtedly the International Harvester Company obtained for itself a big supply of sisal fiber out of which to make sisal and "Standard" twine for this year's use. But as there is about three times this amount of sisal fiber annually delivered in this country there is no reason to suppose the heavy purchase by the International really means that it is in any thing like full control of the situation. Moreover, by dint of constant effort the Plymouth company is making a distinct impression in its attempts to convince the farmers of the country that manila is the best twine to use.

On the face of things, sisal twine and "Standard" twine are cheaper than manila. That is, they are quoted at a lower price per pound. But owing to the difference in the length and quality of fiber, more feet of the manila can be purchased for a dollar than of the sisal and "Standard." A ball of the sisal or "Standard" has five hundred feet of twine. The manila twine comes in lengths of five hundred and fifty, six hundred and six hundred and fifty feet. Pure manila is of the six-hundred-and-fifty-foot length. The Plymouth company is pushing the twines of these lengths, and at the opening prices for 1910 it is able to prove that the six-hundred-foot manila is the cheapest twine for the farmer to use.

The announcements of the Plymouth company contain tables showing how many feet of each grade can be purchased for one dollar, and these tables, which are admitted to be correct by impartial authorities, show that at the opening prices for 1910 merchants and consumers will find the six-hundred-foot twine is the cheapest of all the varieties they can use. This is true whether sisal,

"Standard," five-hundred-and-fifty-foot manila or pure manila be considered. The Plymouth company is able to show further that next to the six hundred-foot variety in intrinsic cheapness stands the pure manila, or six-hundred-and-fifty-foot variety, and next to that stands the five-hundred-and-fifty-foot twine. The most expensive twines for the farmer offered for 1910 are the sisal and the "Standard." Lower in price per pound, their shorter length make it possible for the twine of greater length to eclipse them in intrinsic value. It is argued, moreover, in favor of the twine of greater length that it is more convenient for use in the binder, owing to the fact that changes in balls are less frequent.

Last fall the Plymouth company promised that it would make the difference in price between the various grades less than it was last year. This promise has been carried out. The following are the opening prices on binder-twine for 1910 given by the International and Plymouth companies, and also last season's opening figures:

|                   | International. | Plymouth. | Last Season. |
|-------------------|----------------|-----------|--------------|
| Sisal .....       | 7¾ cents       | 7½ cents  | 7½ cents     |
| Standard .....    | 7¾ cents       | 7½ cents  | 7½ cents     |
| 550-foot .....    | none           | 7¾ cents  | 8 cents      |
| 600-foot .....    | 8½ cents       | 8¼ cents  | 8¾ cents     |
| Pure Manila ..... | 9¼ cents       | 9 cents   | 10 cents     |

These figures are less one eighth of a cent for ten thousand pounds or one quarter of a cent for twenty thousand pounds. Chicago, Milwaukee and St. Louis delivery is contemplated. For Kansas City and Minneapolis delivery, add one quarter of a cent.

It will be seen from the above that the opening prices are not only no higher than they were last year, but that prices on the manila varieties have materially lowered. This lowering process is due to the efforts of the Plymouth company to create a demand for the manila by

seeking to educate the consumer on the question of what is the cheapest twine in the long run to use. No large producer of manila has ever done this, at least on comprehensive scale.

One phase of the situation which is extremely interesting relates to the state prisons, which are making binder-twine. The 1910 quotations make for them a pretty serious problem, as they do for manufacturers who in the past have made nothing but sisal twine or "Standard." The raw material costs from three quarters of a cent to one and one quarter cents more than last season, though the selling price of twine has not increased. On the one hand the International has bought a big supply of sisal fiber in Mexico at a relatively low figure and does not need to increase the prices of sisal and "Standard" twines in 1910. On the other hand, the Plymouth company is forcing sisal and "Standard" twines to a price no greater than in former years by the low prices it is putting on manila twines. The prisons cannot increase the prices on their sisal or "Standard" twine, yet can make little or nothing out of it at current fiber prices.

Various manufacturers of sisal twine or "Standard" are in the same position. Just how they will solve the problem is a question. It will be difficult, especially for the prisons, to go into the business of making manila twines, for they have not the facilities. Some of the manufacturers of sisal or "Standard" may find the transition less difficult. It is not hard to perceive that the present situation, though the International has no corner, is one that may redound to its benefit by driving some of the makers of sisal or "Standard" twine to the wall or into the business of making manila twines. Thus the war against sisal fiber and the twines made from it, though hurtful to the International in one sense, may result in eventually clearing the field of some of its competitors.

## Agriculture in Michigan Schools

How Consolidation is Solving the Country-School Problem—By Edwy B. Reid

MANY of the states have introduced, or are debating the policy of introducing, agriculture into the schools, and many prominent educators are awaiting the outcome of this new turn of popular education with bated breath. The step is one which it is hard to value rightly at this early stage, and many claim wonderful things for this new idea of agriculture in the common schools, while the other faction generally claim that the pendulum has swung to the extreme. There are very sound arguments on either side and it would take a prophetic look into the future twenty years to tell what will be the exact outcome. One thing that almost everybody is agreed on is that agriculture, if it be taught at all, should be taught in the rural schools.

Michigan has entered upon the policy of introducing a course of agriculture into the high school, and six of them are giving the work this year. The course covers agricultural botany in the ninth grade, crops and horticulture in tenth grade, live stock and soils in the eleventh grade and animal breeding and feeding and farm management in the twelfth grade. Two of these schools are giving the work in full in all four of the high-school grades; the other four are giving the work in the ninth, tenth and eleventh grades. The average number of students taking the agricultural studies in the six schools is thirty-two, the highest number of students in any school being forty-six, the lowest twenty-five. In character, the study is divided about equally between text-book work and field and laboratory practice. Actual experiments and observations are made in each of the subjects studied. Each of these schools employ a special instructor for the subject of agriculture, who has received his training at the Michigan Agricultural College. The salaries paid range from seven hundred to nine hundred dollars. In each case the instructor teaches one or two subjects in the regular high-school course. The added expense for laboratory facilities and material does not exceed fifty dollars a year. In each case special books on the various agricultural subjects are provided in the school libraries.



A Lesson in Cold-Frame Culture

In addition to the regular work of the pupils, a special course is arranged during the winter months for the farmers of the surrounding country. Courses are presented by the regular instructors in the high school, supplemented by lectures by members of the faculty of the agricultural college. Some of these schools have been established three years and they are giving every satisfaction in the vicinities where they are located. At first some of the farmers in the communities were against the work, but after they saw what was being accomplished they became ardent advocates of it.

The growth of the school system in Michigan has been simply an evolution. In the early days the school-houses were the traditional little red one-room buildings, and these were equipped on a small scale for a limited number of subjects to be taught. The growth has been of more school-buildings of the same type, rather than of additions and improvements of the initial houses. This has been simply continued by force of cir-

cumstances as the population increased, until now there is a wooden, one or two room building in at least every district.

One of the changes coming into vogue is consolidation. There are now at least four consolidated schools in the state, and a number that will be consolidated this year. The greatest benefit will come, I believe, under the "township unit system" which means that each township will constitute one district, with one board of education, a central high school of twelve grades, as many primary schools as are needed at properly-located points in the township, expert supervision and better housing and equipment.

The consolidation of two or more districts in isolated instances may be of some value, but if we are to obtain adequate results the consolidation should at least go far enough to put one high school within reach of every township. For instance, in one Michigan county there is a township composed of ten school districts with something like three hundred and fifty pupils on the school

census. Of this number ninety are between the ages of fourteen and eighteen, or high-school age, and about forty of these ninety are able to attend such a school. The others are either pursuing an indifferent course offered as an extra in the nearest primary school or are not attending school at all. The particular conditions are typical of the state in general; and the most pitiable part of it is that while the parents of the forty are able to send their children away from home to school, the lack of ability to do so on the part of the parents of the other fifty, who are equally as bright and should be given privileges that are equal, closes the door of opportunity to them.

Prof. Walter H. French, who holds the chair of agricultural education at the Michigan Agricultural College, in referring to the above-mentioned township said, "The remedy for the conditions now existing, it seems to me, is to unite the whole territory of that township into one school district and establish near or at the center of the township a school for the lower grades and also a high school for the instruction of all children above the sixth grade, and construct an adequate building. Then discontinue the use of all the present school-buildings except four, which are conveniently located toward the corners of the township, and in these instruction for the younger children, or those below the sixth grade, could be given by one teacher, and these pupils when they have passed the sixth grade would go to the central school. This plan would reduce the cost of transportation to the minimum, and through consolidation, not simply of territory, but of interest of the people and of the products of taxation, the people of that township would accomplish the thorough practical training of all the children of the township almost at their own doors."

Many are objecting to the abandonment of the old school-buildings, claiming that it will raise the taxes too high to sell the old houses and erect a new one; others will and do oppose the reformation because of the seeming great expense of hauling the children to the central school. There are good arguments on both sides of these questions and local conditions have much to do with determining them.



# A Transformer of Cotton

## What Southerners Owe to a Farmer-Preacher—By Fred A. Olds

Only lately have we realized the possibilities for breeding new traits into plants as we have into animals. One of the first to recognize this, in the case of cotton, was the North Carolina farmer whose story we here present. Any one can sense the value of a selected type that doubles the old-time yields; but it takes a Southerner, with knowledge that early maturity means boll-weevil immunity, to realize the true worth of Mr. Simpkins' achievement.—EDITOR.

IT HAS long been known that seed brought from more northerly regions produce more satisfactory crops in southern sections, and hence in North Carolina, for example, garden-seed from the middle states are largely used. This idea has been carried out as to cotton-seed, but it has remained for North Carolina to furnish the seed which have been found best for the great fight against the boll-weevil. Only one hundred miles north of Raleigh is the northern boundary of King Cotton dominion, as beyond that line the crop is uncertain. Strange to say, the cotton in this section of North Carolina in general matures earlier than the ordinary cotton grown in the far South. The effort has been made, and it has been crowned with success, to develop a cotton-seed which will mature earlier in the far South than in this state, and thus be on a par with the garden-seed, which, as above stated, if brought here from Maine will mature earlier than in that state.

The man who has solved the problem is a farmer-preacher, Elder William A. Simpkins, and it has remained for him to produce a type of cotton to which he has given the name of "Simpkins' Prolific," and he says that in proof of his claim that it is the earliest of all cotton, that thorough tests made of the seed sent to the far South from here, notably in Louisiana and Texas, show that it matures in ninety days from planting; that it is more prolific and yields more lint, the lint average being forty per cent of the cotton as picked, which is commonly known as "seed-cotton."

This wonderful cotton had its origin in this county, Wake, three miles from Raleigh, and the care taken to develop it has been, and is, remarkable; as remarkable, in fact, as the rise of the man who gives his name to this particular type of cotton. Mr. Simpkins was born in this county forty-one years ago, and he has been farming since he was sixteen years of age, beginning as a tenant, operating a three-horse rented farm. Fourteen years ago he came to a farm two miles south of Raleigh, where he operated as a tenant a four-horse farm, beginning for himself just eleven years ago, devoting himself then entirely to truck. He became easily the best truck-raiser this section has ever known. At the Jamestown Exposition in 1907 he won the gold medal for the best exhibit of truck shown there from anywhere.

In a small way, and as an experiment, he began the cultivation of cotton for the purpose of seed improvement. He had no idea of ever being a shipper, his purpose being to get a very fine type of plant, not too large, very heavily fruited and with large bolls, and to, if possible, double the yield. It may not be known generally, but it is true, that North Carolina produces more cotton to the acre than any other state; but even here half a bale to the acre has been considered until recently a fair result.

The writer several years ago went to this farm of Mr. Simpkins and there saw, for the first time, some of the remarkable results he had then brought about. He pointed out the fact that his cotton had in some cases bloomed within forty-five days after planting, had grown bolls in ninety days and opened bolls in one hundred and twenty days. Mr. Simpkins took a rather strange way of developing his cotton at first. He planted his truck in rows very wide apart, and between these rows selected cotton-seed were

planted, this work beginning eleven years ago. He bought the best kind of seed he could find, and found two stalks which fruited and matured fully two weeks earlier than any of the others. These stalks were found to be perfect in shape, and every seed from them was very carefully picked and preserved for the next season's planting. Then began another line of tests, the seed from these two stalks being planted in various kinds of soils and fertilized in various ways. All these seeds were handled entirely separate from other cotton, every poor plant having been cut out and thrown away, and year after year this has been done, this season on all three of the farms he has acquired. He has become the most notable cotton-grower in the county or in

the ground, and being wonderfully even, so that one could go along and find stalks in plenty with more than one hundred open bolls, every boll being of large size, the fruit extending to the very top. The cotton thus grown of the test crop was picked by persons not connected with Mr. Simpkins in any way, a record made daily of the amount picked. It was found when the last of the cotton was gathered in November, not long after the first killing frost, that the yield was thirteen hundred pounds of lint cotton to the acre, which is three and one quarter bales.

Now this, it would seem, would satisfy any cotton-grower, but Mr. Simpkins is resolved to continue the work further and to produce four bales to the acre, and he believes this can be done by seed

to the cotton-growers of this country and he says in his plea for at least two bales to the acre that the chief need is seed selection; next, better plowing; next, the liberal feeding of the soil with cow-peas, manure and commercial fertilizer; thorough harrowing. He plants in rows from four to seven feet apart, placing the plants from two to three feet apart and allowing only one stalk in the hill. He declares that it is almost impossible to manure land too highly for cotton, provided the latter is properly selected and given plenty of distance.

What is desired, he states very clearly, is an early dwarf cotton—that is, a variety which will not make an excessive weed on the richest soil; a variety which joints closely on the stalk and which blossoms and matures early. He says cotton ought to be planted just as early as climatic conditions will permit and that late-planted cotton cannot do its full work. He is positive that every third or fourth year the land should be sown in cow-peas, and at least every other year should be broadcasted with stable manure, twenty-two horse-loads to the acre being a fair allowance; this manure to be thoroughly spread and allowed to remain on the land until plowed under in March. Then as to commercial fertilizers he advises the use of at least a thousand pounds to the acre, half of it to be used before planting and the other half when the cotton begins to fruit, for he has found that this will keep the plant vigorous and help it retain its fruit. He has found by careful experiments that one reason why cotton sheds so fast, oftentimes in the latter part of the season, is poverty of soil and plant. This year on his test field of cotton, which produced three and one quarter bales to the acre, Mr. Simpkins used as much as one thousand seven hundred pounds of high-grade fertilizer to the acre.

As to the question of getting the best seed, Mr. Simpkins says that nothing is more important, because the cost is very small, even when the best are purchased. For example, it costs about one dollar and fifty cents to plant an acre with the best seed, and fifty cents to plant with inferior seed. The surest part of a cotton crop is the fruit which comes earliest, for it is always sure to mature. The writer was very greatly impressed by the open appearance of the Simpkins cotton, this being due to the fact that the leaf was very small. This was a great advantage, because plenty of sunshine can thus reach the bottom bolls and make them open early. Another feature is that the bolls are larger than ordinary, grow closely and are sometimes doubled from one end of a limb to another. On one limb, next to the ground, thirty-five mature bolls were counted. A great many of the stalks showed upon count two hundred bolls each.

It seems almost like a dream to see Mr. Simpkins, a tenant farmer only a few years ago, now the owner of three of the finest farms in this section, with an income twice

that of the governor of his state, and known all over the cotton-growing section. With it all he is very modest and continues to preach, being an elder in the Primitive Baptist Church. It is thoroughness which has made Mr. Simpkins the greatest cotton-seed specialist in the world, for that is what he now is. He asks the writer to say to the readers of FARM AND FIRESIDE that few people really know the possibilities of their farms and that he considers soil study one of the most useful things in the world.

This season he will distribute quantities of his special seed to several hundred nearby planters as he is sure that, great as his business already is, it is only a tithe of what it will be, for he knows quite well that he is the prime factor in the great fight against the boll-weevil, and that, as the apostle of new methods of cultivation and type of plant, he is to do a vast deal for cotton-growing in this country.



Picking Season in the First Field of the New Cotton

the state, not for the amount grown, but for the heavy yield to the acre and the extremely high quality of the lint. The picture taken in his field four years ago tells the story much plainer than any words, but since that time there has been an advance every year.

Mr. Simpkins has taken another step, finding that his experiments had proved so much, and has given all his spare seed from this selected cotton to his farmer

selection. So every seed from this test planting is kept separate from seed grown anywhere else on the farm. As the cotton and the seed now represent to a farmer something like eighty-five dollars to the bale, it will be readily seen that such an achievement would mean a revolution in cotton farming in the South. As a champion producer of cotton Mr. Simpkins already stands in the class with Mr. John F. Batts of this county, who



A Single Fine Specimen of Simpkins' Prolific



Shipping the Product of Mr. Simpkins' Farms

neighbors, on the condition that they would plant it separately, gather it and gin it so as to keep it absolutely separate from all other cotton, and that they would sell him at a fixed price all the seed which passed inspection.

When Mr. Simpkins began these experiments not a farm in this state averaged a bale of cotton to the acre, while now two bales is not an uncommon yield, and thus the producing power of the farm has been already doubled. Even this does not satisfy Mr. Simpkins, for he has this year produced over three bales to the acre on a test farm. To show the care taken in this matter the writer may say that this farm is four miles from Raleigh, at a point where the clay has given place to sand to a large extent, though the land is very rolling. The cotton presented a very peculiar appearance. The stalks were not quite four feet in height and as broad as they were high, the branches starting directly above

heads the corn-growers of the world with his yield of two hundred and twenty-six and two thirds bushels from an acre (described in January 10th FARM AND FIRESIDE).

When the Farmers' National Congress met in annual session at Raleigh in 1909, scores of the delegates went out to see Simpkins' cotton, nearly all of which had then been picked, though some on a fifty-acre field had been saved so that they might see it, and they expressed astonishment at what looked like a field of snow, though this was not the famous test-planting. Not a few of them wanted to know what Mr. Simpkins would produce on that particular fifty-acre section. He tells me that he sold the ninety-nine bales which it yielded, with the seed, all in a lump, for eight thousand dollars, and had he waited a few days he would have gotten several hundred dollars more, as there was an advance in prices.

Mr. Simpkins is a man with a message



# Give Your Soil What It Needs

## A Few of the Fundamentals of the Great Farm Problem

### What Manure is Worth

It is difficult to estimate the value to the farmer of stable manure in the same way commercial fertilizers are valued, since the market value of the fertilizers is calculated on the basis of the cost of the different elements of plant-food at the principal centers of distribution. No account is taken of the freight charges and hauling expenses from the railroad station. With stable manure we save the freight charges. Besides, the stable manure is valuable for the humus it supplies to the soil, as well as for the direct plant-food. Doctor Aikman calculates the humus of stable manure to be as valuable as the direct plant-food which it contains. There is another consideration in favor of the manure; it is of alkaline nature and encourages the growth of legumes, while the continued use of acid phosphates is thought to sour the soil and at last hinder the growth of legumes.

A ton of average stable manure contains about 10 pounds of nitrogen worth 15 cents, \$1.50; about 10 pounds of potash worth 5 cents, 50 cents; about 5 pounds of phosphoric acid worth 6 cents, 30 cents; total \$2.30. When we consider the value of the humus to the soil it is conservative to estimate a ton of well-cared-for stable manure to be worth four dollars and sixty cents. But if it is not well cared for half of its value is likely to be lost.

Manure means many dollars to the farmer who keeps any great number of live stock. In spite of the fertility that is sold off the farm with the animals and their products, I believe that it is possible actually to increase the productiveness of the farm by caring for and applying the stable manure and by cultivating legumes. There are many tons of latent plant-food in the soil of every farm, and the stable manure and legumes, coupled with good cultivation, will render this latent plant-food available. It may be necessary to doctor the soil with an occasional application of lime, and some acid phosphate may be necessary; but it is a bad policy to spend money for commercial fertilizer until one has made use of the stable manure for all it is worth. A. J. LEGG.

### Clover as a Soil Stimulant

It is not my purpose to minimize the value of the clover to our rotation of crops, or its ability to increase the amount of available nitrogen in the soil, but rather to point out a few of the limitations of its ability to maintain fertility on soils that are not liberally supplied with manure or fertilizer carrying considerable quantities of phosphoric acid and potash.

Every up-to-date farmer knows that clover has the power of obtaining a large proportion of its nitrogen from the air, which saves the expense of buying this, the most expensive element of plant-food. Too few farmers realize that clover will rob the soil faster of phosphoric acid and potash than almost any other crop we grow. If there is not a sufficient amount of manure or fertilizer returned to the soil to replace these elements the time is sure to come when the growth of crops will be limited by the amount of available phosphoric acid and potash in the soil.

Such a condition is already noticeable on many of the most productive farms where clover has been grown for years and goes to show that many of the best farmers have been devoting too much attention to increasing the supply of nitrogen without manuring to supply an equal or corresponding amount of available phosphoric acid or potash. This is especially noticeable in the case of phosphoric acid, for on many fields where clover has failed good stands have been secured by a liberal application of a fertilizer rich in this one element.

Considered from a truly practical and a more permanent standpoint, clover adds but very little to the fertility of the soil, but, like lime and land plaster, it acts as a stimulant and enables us to grow larger crops of corn, wheat, oats and other crops until the soil becomes depleted of its mineral fertility. Of course clover possesses an ability to obtain considerable of its mineral fertility from greater depths than other crops with shorter root systems, but other crops that have deep root systems might be used to as good advantage as clover, as far as that is concerned. Clover, however, is a much more powerful soil stimulant than the non-leguminous crops, because it has not only the power to obtain mineral plant-food from greater depths, but it also has the power to improve the physical condition of soils and obtain nitrogen from the atmosphere, which helps to insure larger crops of clover which will require large quantities of mineral plant-food and insure larger crops of grain and grass, which will remove still greater amounts of phosphoric acid and potash from the soil.

The final result of depending on clover to maintain soil fertility without replacing the large quantities of phosphoric acid and potash that are removed from the soil cannot result otherwise than in the failure of the clover crop as soon as one of those elements becomes exhausted. That leaves the farmer in a worse condition than when he practised a rotation that did not include clover. In a word, clover-growing does not "maintain" fertility; it maintains the

supply of only one element—nitrogen. As for the other elements, it hastens their depletion, by its own heavy consumption and by stimulating for a few years a great growth of the other crops in the rotation. On all fields where clover is beginning to fail the farmer should look well to the cause, which is too often a simple exhaustion of the mineral elements.

Farmers have depended on clover to do too much. The legitimate use of the clover crop is simply to promote the fertility of our soil in regard to its humus and nitrogen content. It should be supplemented by liberal amounts of mineral fertilizers.

The ideal place for clover is on a stock farm. Growing clover to furnish humus-making material and food for the stock means an increase in the capacity of the farm to carry stock; and an increase in the amount of stock fed on the farm means an increase in the amount of humus-making manures and a smaller demand for mineral fertilizers. Clover judiciously managed to promote live-stock feeding is one of the best crops we can raise, but when it is used as a stimulant to temporarily increase the yields from our grain-impooverished soils to grow grain for market it does nothing but harm in the end. It is more dangerous because it is more powerful than any other soil stimulant and will assist in unlocking plant-food that lies beyond the reach of the others. W. MILTON KELLY.

### Ashes for Clover-Sick Soils

It has been the custom in this section to "stock down" with clover and timothy. The clover, if one got a good catch, lasted two years, and the timothy remained for permanent grass until in the order of things the field was plowed again. Stable manure and sometimes commercial fertilizers were the usual applications. Of late years, however, it has been almost impossible to get a good catch of clover.

Several years ago in the field opposite our house a wheelbarrow-load of hardwood ashes was upset. It was gathered up again as well as it could be, but much of it remained on the ground—probably a bushel on a spot six by eight feet. The field had been seeded for some time, but the clover was growing hardly at all, and the timothy was very poor. That summer the spot where the ashes were spilled came in thick and stout with clover. It was a veritable oasis in the desert and when in bloom attracted much attention from passers-by, who supposed, until enlightened, that clover-seed had been spilled there.

A strawberry-bed on which unleached

wood-ashes were scattered came into clovers, red, alsike and white, so persistently that it choked the strawberry-plants. Left to itself it gave good clover for several years.

Last season and the one before we had a bad drought. Young grass-plants were burned by the sun and no one got a good catch either with a nurse crop or without. On a neighbor's field of very light soil one small section received the ashes from the house; the remainder was fertilized with stable manure. It was all sown to clover and timothy with oats. The oats were a light crop. In the autumn the ash-strewn part of the field showed a good stand of clover that had resisted the drought. The remainder of the field bore only a small number of very sickly-looking timothy, and clover plants. There could be little doubt that the ash fertilizer, by making the plants strong and hardy, had helped them to resist the drought. SHIRLEY BURNS.

The three articles on this page, if you read them in combination, present most excellently some of the fundamentals of the fertility problem.

The principle Mr. Legg develops is almost as old as agriculture, but it will bear repetition until the day when everybody is applying it.

The second article sounds a needed warning against overdoing the legume idea. Clover, despite the cheap nitrogen it puts into the soil, only hastens the consumption of the other elements. The answer, of course, is to supplement the clover with manure, or even phosphate and potash fertilizers.

Lastly, Mr. Burns makes a point that supplements Mr. Kelly's article. Soils cropped to legumes are likely to stop yielding long before they are really exhausted. Clover, grown continuously, sours the land until it can grow no more. There was nothing particularly magical in the results of the ash applications described. The lime in the ashes neutralized the acidity of the soil. It is even possible that the lime naturally in the soil was so far exhausted that the plants could not get even the trace of that element they require for plant-food.

This is a different and simpler difficulty from the actual soil exhaustion Mr. Kelly speaks about. The latter has to be corrected by liberal manuring and even the use of mineral fertilizers. "Clover sickness" can occur even where land is kept well fertilized; it can be cured by simple liming, as farmers all over the East are finding out. Unleached wood-ashes, when you can get them, are an ideal cheap source of lime, and hardwood ashes, especially, carry considerable potash besides. EDITOR.

# The Cement Tank

## A Feed-Lot Convenience and the Way to Make It—By A. A. Houghton

CONCRETE is gaining favor as a material for farm tanks, for it has every advantage over wood or metal in durability and moderate cost; it is also a material that can be handled with economy of labor, during leisure hours.

Fig. 1 shows a set of simple forms requiring very little lumber for use in constructing a circular tank. This method also economizes time.

The first requisite is two posts or stakes placed in the ground solidly at least two feet farther apart than the diameter of the tank; thus if the tank is to be ten feet in diameter and two feet high the posts are placed twelve feet apart and stand three feet high. These posts are connected by a two-by-four scantling as illustrated; in the center of this a hole is bored for the center pivot rod which may be a handspike or any iron rod of the necessary strength.

A form is now framed in the shape shown, of exactly one half the outside diameter of the completed tank; the top piece A should be four inches longer than the bottom piece B. These two pieces are fastened together by the two uprights C and D. The piece C is cut the exact slant height of the inside of tank from bottom to top; piece D is the height of the tank and is used to make the form more rigid.

Two pairs of holes should be bored at

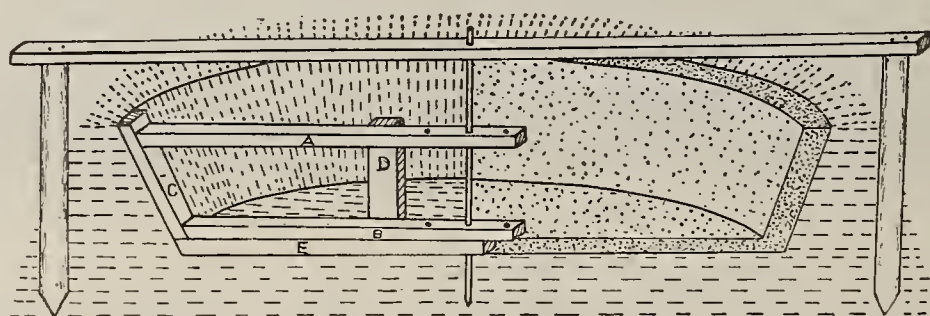


Fig. 1—The Revolving Form

one end at the distance apart you wish the walls of the tank to be made, which may be six or eight inches, depending on the size of tank; the holes are made so that the iron center rod will easily go through them and form a pivot on which the form can be turned around in a complete circle.

Piece E is cut slightly longer than piece B and is fastened to it below with two bolts so it can be easily removed. The whole form is made of two-by-four lumber and made rigid as possible.

Pile up sand in a circle about where the outside walls of the tank are to be placed; then with hose or sprinkling-can thoroughly dampen this sand so it will pack together solidly. Now set up your form frame with the iron center rod sunk

in the ground and placed through the holes at the extreme inner end of the form; then by simply swinging the form around in a circle you press the sand into a sand mold of the shape the outside walls of tank are to be made; where this is not perfect at first, add more sand and revolve the form until the sand mold is perfect to the desired height.

Now remove the bottom piece E and set the form back on the center rod to the second pair of holes and you are ready for the concrete. This is mixed as dry as possible; it should be just thoroughly damp to mold best. It is piled up with the shovel inside the sand mold and over the bottom. Then revolve the form in the same manner as in making the sand mold, thus pressing the concrete in-

to position in a complete circle with the walls of even thickness entirely around the tank.

The revolving form is then removed and the hole in the bottom made by the handspike is filled with concrete, while the sand mold is allowed to remain at least until the tank is thoroughly hard.

For any tank over six feet in diameter a foundation should be laid from six to ten inches in depth and made of coarse concrete. The diameter of the foundation should be slightly greater than the outside diameter of the tank. A wood pin is placed in the center when laying the foundation so as to provide an opening for the handspike or center rod of the revolving inner form; this hole is later filled with concrete.

This form is easily constructed and operated, and it may be employed in constructing tanks of several different sizes and varied thicknesses of walls by arranging the holes bored for center rod so as to make it adjustable to the size desired.

The concrete should be in the proportions of four to one and well tamped into the molds. Every cement tank should be finished with a liquid cement brush coat, made by mixing cement with water to the consistency of thick cream and painted onto the inside surface of the tank several times, to insure the work being waterproof.



# Farm Notes

## Profit and Loss

THE old year has ushered in a new one. What has been achieved during the past year? What were its victories? Its failures? How may we profit next year by mistakes of the past. Such questions are naturally forced upon us at this season of the year. There are various ways of answering these questions. Business men generally take advantage of slack trade after the holidays to take stock and to "check up" on the results of the year's work.

It is very unfortunate that so few farmers follow the excellent custom of taking an annual inventory. There is nothing difficult about it. No bookkeeping whatever need be done. No special form need be observed. What is necessary is merely to list what you own and what you owe. A very simple form is shown below:

| Inventory, Harris' Farm, Mar 31, 1907     |      |       |
|-------------------------------------------|------|-------|
| Resources                                 |      |       |
| Farm, No. A with buildings & Improvements |      | 8000  |
| Product                                   |      |       |
| 200 bu. Corn                              | 50¢  | 100   |
| 150 bu. Oats                              | 45¢  | 67.50 |
| 200 bu. Wheat                             | 85¢  | 170   |
| 20 tons Hay                               | 6.00 | 120   |
| Potatoes & Vegetables                     |      | 50    |
| Stock                                     |      |       |
| 6 Horses, average                         | 100  | 600   |
| 20 Cows                                   | 40   | 800   |
| 11 Sheep                                  | 12   | 132   |
| 5 Hens                                    | 11   | 55    |
| 12 Ducks                                  | 6    | 72    |
| 25 Sheep                                  | 8    | 200   |
| Poultry                                   |      |       |
| 150 Chickens                              | 45¢  | 67.50 |
| 21 Turkeys                                | 7.00 | 147   |
| Implement                                 |      |       |
| 1 Plow                                    | 15   | 15    |
| 2 Harrows                                 | 25   | 50    |
| 1 Mower                                   | 40   | 40    |
| 1 Hay Rake                                | 15   | 15    |
| 1 Wagon                                   | 120  | 120   |
| 2 sets Harness                            | 90   | 180   |
| Miscellaneous tools                       | 50   | 50    |
| Supplies                                  | 25   | 25    |
| Household Furniture & Supplies            |      | 350   |
| 6 yrs. Insurance, Prepaid                 |      | 900   |
| Cash on hand and in bank                  |      | 650   |
| Total                                     |      | 11641 |
| Liabilities                               |      |       |
| Unpaid Labor                              | 75   | 75    |
| Outstanding Accounts                      | 125  | 125   |
| Mortgage due April 1, 1910                | 2000 | 2000  |
| Total                                     |      | 2200  |
| Net Worth                                 |      | 9441  |

The inventory may be considered the most important document among the farm records, because without it no results at all can be obtained. It should be taken at such a time as will give the most accurate results with the least expenditure of labor. This differs widely in different localities. January 1st seems the most natural beginning of the fiscal year, but the objection is that at this time there is apt to be a large quantity of feed and supplies on hand. April 1st would be a better date so far as the stock on hand is concerned, but inconvenient in many localities on account of the pressure of spring work. Whenever it is taken, it should be accurate. No guesswork should be tolerated. Weigh and count; do not estimate. Then assign the actual market value to the property, taking due account of depreciation.

## Figuring Depreciation

Right here is where serious errors are committed by the average farmer. Neither an old wagon nor and old horse is worth as much as new ones. The same holds true, with very few exceptions, of all equipment, animals, houses and improvements. The question as to what rate shall be charged off annually, so as to create a sinking fund with which to renew the depletion, has been an open question with accountants since time immemorial. It is particularly difficult to determine the depreciation of live stock, work-horses and depletion of the fertility of the soil. Without entering into a discussion of the subject, I give below the experience and opinion of the best authorities on the subject. The thoughtful farmer will find no difficulty in adjusting these rates to suit his conditions. For the purpose of general estimates, the following rates of depreciation on the cost or market value are fairly accurate:

|                                                                     |              |
|---------------------------------------------------------------------|--------------|
| Building (including insurance and repairs)                          | 5 per cent.  |
| Horses, above five years                                            | 10 per cent. |
| Milch-cows                                                          | 8 per cent.  |
| Machinery and tools                                                 | 10 per cent. |
| Depletion of land on account of continued cropping after fifth crop | 2 per cent.  |

## How to Determine the Profits

Let us assume that your last year's inventory was as above, and that you have taken one of exactly the same form now, showing a net worth of \$10,334.98. The statement of profit and loss would be as follows:

|                     |             |
|---------------------|-------------|
| Net worth now       | \$10,334.98 |
| Net worth last year | 9,483.96    |
| Net Profit          | \$ 851.02   |

This result can be obtained without any bookkeeping whatever; but a simple set of books are indispensable. The objection to the above statement is that while the net profit is shown, it gives no clue as to the result of individual enterprises. One may have been profitable, another unprofitable. One object of bookkeeping is to discover the leaks in one's business—and stop them.

J. A. BEXELL.

## "Save the Bands"

EACH fall we husk a part of our corn in the field, and when the fodder is set up the bundles and shocks are bound with ordinary binder-twine. When the fodder is hauled up, the shock bands are carefully preserved, and on some evening or other idle occasion after the bands have all been secured, they are tied together and rolled into balls of convenient size. The shorter bundle bands are not preserved when the fodder is fed, unless at that time we are husking corn in the barn and wish to bundle the fodder for handling.

The following autumn the balls of twine are brought out when the corn is husked in the field, and used again in bundling fodder. The fodder-shocks, however, are bound with new twine. If the corn is hauled up and husked in the barn the bands are saved and used to bundle fodder.

Of course, when corn or fodder shocks have remained in the field a long time, the bands rot too much to be useful; but usually we are able to use the same twine twice or even three times. This is one of the "little things that count" on the farm.

P. C. GROSE.

## Agricultural News-Notes

On account of the diminishing supply of Pacific Coast red salmon, there is now an increase in the demand for pink salmon.

There is an alligator-farm near Sarasot, not far from Tampa, Florida. There is a brisk demand by tourists for the small "gators" also for the hides of the large ones.

Unquestionably the lack of a parcels post system, similar to that of Great Britain, is a hindrance to rural progress in this country. The farmers want it and will now get it.

No more serious danger to the vital agricultural interests of the nation now exists than the consolidation of interests which seek to get possession of the water-power on the various rivers.

Texas is acquiring a national reputation as a turkey-growing state. Dallas is said to be the largest shipping-point. The refrigerating system, by which dressed turkeys can now be placed on distant markets irrespective of weather conditions, is promoting the rapid growth of this industry.

## Beginning With Poultry

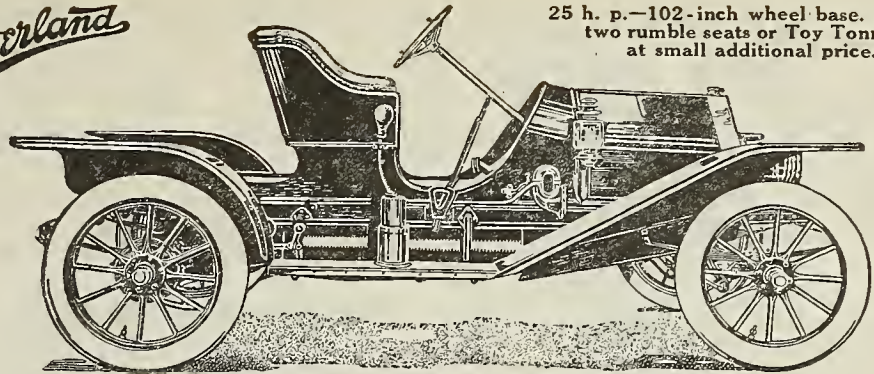
[CONTINUED FROM PAGE 3]

known many people living in towns who kept a few hens to supply their tables with eggs, who always had one or two males in the pen, thinking this was necessary to get eggs. The male is of no value whatever, except when eggs are used for hatching.

I have made more money producing market eggs and poultry than any man I know of, and it was done by managing the business in a business-like manner. An Irish friend of mine who had been a railway brakeman about twenty years said one day: "The boys spent their money as we went along. I saved mine. Now the boys are all old, and hunting places as flagmen and such, and living from hand to mouth, while I am at ease, with enough saved up to last me the rest of my days." Like him, I am comparatively at ease, but not sitting down and doing nothing. I am keeping up my little flock of layers and carrying on experiments which I did not have time for when I was busy working for profit.

I can tell the person who desires to go into the poultry business that there is money in it when it is managed right. If he will go into it carefully, beginning with only a few fowls, and with a determination to win, he will win. Stick to the American breeds. Select your breeders from the best you have and produce all your own breeding stock. There are eggs and meat and health in sound food, clean water and pure air, and there is money in eggs and meat. Give your fowls an abundance of the first, and they will give you the last.

The Overland



25 h. p.—102-inch wheel base. One or two rumble seats or Toy Tonneau at small additional price.

## This Car for \$1,000

This is how an enormous output has cut the cost of Overlands 20 per cent.

In our largest factory—once the great Pope-Toledo plant—we are turning out eighty Overland Models No. 38 per day.

We are making under one roof nearly every part of the car. And every machine in the factory is adapted to this particular model.

In this way we are saving about 20 per cent. We are giving for \$1,000 a better car than the Overland which last year sold for \$1,250.

Yet last year we gave more than anyone else ever attempted to give for the money.

The reason lies in the Overland's matchless simplicity. A 10-year-old child can master the car in five minutes.

Never was a car so easy to operate—so easy to keep in order. That is why one car has sold others, and the others sold others, until we today employ 4,000 men to meet the demand for Overlands.

## A Wonderful Story

Here is a car so amazingly simple—so handsome, so powerful, so cheap—that in two years it has captured a large part of the whole automobile trade. Neither in city or country is there a car that sells like it.

This sensational success forms a fascinating story, and we have told it all in a book. You cannot know the best about automobiles till you read it. Please send us this coupon today for it.

F. A. Barker, Sales Manager,  
The Willys-Overland Co.  
Toledo, Ohio

A 66

Please mail me the book.

## None Can Compete

It is so with all Overland models—with our \$1,250, \$1,400 and \$1,500 cars. Each is the utmost at its price.

All prices include Magneto and full lamp equipment.

Our four factories must this year make \$24,000,000 worth of Overland cars to fill orders already placed.

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## Simplicity

The demand for Overland automobiles has multiplied 500 times over in the past two years. It has made our sales the largest in the world.

Member of Association Licensed Automobile Manufacturers, Licensed Under Selden Patent.

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are the best made, best grade and easiest riding buggies on earth for the money.

FOR THIRTY-SEVEN YEARS

we have been selling direct and are

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We ship for examination and approval, guaranteeing safe delivery, and also to save you money.

If you are not satisfied as to style, quality and price you are nothing out.

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BRECO HANDY WAGON—5 Years' Guarantee; 30 Days' Free Trial—Satisfaction or Money Back.

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The successful farmer of to-day KNOWS the exact weight of the supplies he purchases; he KNOWS to a certainty how much the products weigh that he sells.

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WITH JOINTED POLE. It is made especially for every day work. It will increase your crops 25 to 50 per cent. This machine will cut from 28 to 30 acres, or will double-cut 15 acres in a day. It is drawn by two medium horses. It will move 15,000 tons of earth one foot in a day, and can be set to move the earth but little, or at so great an angle as to move all the earth one foot. Runs true in line of draft and keeps the surface true. All other disk harrows have to run in half lap. The Jointed Pole Takes All the Weight Off the Horses' Necks, and keeps their heels away from the disks. We make 120 sizes and styles of Disk Harrows. Every machine fully warranted. Send for FREE Booklet with full particulars.

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**PARSNIP**, White Sugar, long, smooth, sweet.  
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**TURNIP**, Sweetest German, sweet, large.  
**Flower Seeds**, 500 sorts mixed, large packet.  
**Sweet Peas**, 1/2 oz. California Giants Grand Mxd. Catalogue and Check for 10 cts. free with order.

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tells all about the 150 acres I am growing for telephone poles. Beats farming two to one. Write today. H. C. ROGERS, Box 188, Mechanicsburg, Ohio

# Gardening---By T. Greiner

## Best Fertilizer for Melons

AN IOWA reader has a piece of white and yellow sand on which he raises watermelons and sweet potatoes. This soil would raise about twenty-five bushels of corn to the acre. He uses some horse-manure, and thinks of applying commercial fertilizers. "What kind is best for each crop," he asks, "and is there any danger of burning the plants?"

Horse-manure, of course, is good. So are hen and sheep manure. But when we don't have enough we must supplement these manures with concentrated ones. The best and cheapest method is to apply a good dressing of plain superphosphate and muriate of potash, or wood-ashes and superphosphate, or, in place of the latter, bone-meal if that is more easily obtained. For nitrogen plow under some leguminous crop, as any of the clovers, cow-peas, etc., whichever best suits the climate or location, to serve in and after its decay as food for the succeeding crop. This is an easy and cheap way of improving and keeping up the fertility of the soil, and a sure way of raising good, paying and clean crops, although it takes an extra year's time to accomplish it.

If that is too slow, you have to use the more expensive complete fertilizers offered at thirty-five dollars a ton or upward, which have a guaranteed analysis of three or four per cent nitrogen, eight to twelve per cent phosphoric acid and six or eight per cent of potash. You can easily use half a ton of such fertilizer to the acre, scattering most of it broadcast, and putting the other part in the hills

just before planting, but in a wide circle and well mixed with the soil.

If you use fertilizers with cow-peas or clovers, the application ought to be four hundred pounds of superphosphate (acid phosphate or dissolved phosphate rock) and two hundred pounds of muriate of potash to the acre. Even then you may use a little bone-meal or tobacco-dust, or both, in the hills just before planting the melons. For sweet potatoes, I believe in using most of the manures, whether domestic or chemical, in the hills.

## Tomato Trouble

A Virginia lady writes that the tomatoes in her vicinity have for the past three seasons been blighted. First the lower leaves decay, and at ripening-time the tomatoes begin to rot. The spots appearing on them look very much like sun-scald.

A general infestation of any disease of cultivated plants is always a subject for experiment station investigation. Their help should be solicited. New diseases are apt to develop in any section. The trouble in this case may be a combination of several diseases, some or all of them amenable to treatment. The station people are in better shape to offer advice than any one not acquainted with the local conditions. I believe, however, that the trouble is one prevailing in many sections, especially South and West, and can only be prevented by raising the seedlings in sterilized soil. If you cannot do better, expose the flats, in which you expect to sow your tomato-seed, to the heat of an ordinary bake oven until the soil heats thoroughly. Afterward sow seed in these flats and water them with water that has also been sterilized. I have never had much success in treating plants for sun-scald, nor for the black rot or blossom rot of the fruit, by spraying or other means.

## Changing Seed-Potatoes

Shall we send to some far-off section for seed-potatoes or use our own? It is a question often asked. I believe if a variety runs down on the grower's hands, it is largely or entirely his own fault. Careful selection of seed-potatoes will prevent degeneration. By getting seed tubers from other sections we run some chances of introducing new diseases. Professor Stewart of the Geneva station tells us that there was absolutely no late potato blight in the state of New York last season, and, consequently, the potatoes grown in the state are entirely free from infection. The only chance for us to get blight in our New York potato-fields in 1910 is by sending for seed-potatoes to localities where the crop was blight-affected last season.

## Which Tomato?

For a really good early tomato I know of nothing at this time that is better than the Earliana and its various strains. Several so-called improved strains of this are being sent out by different seedsmen, such as No. 10 and Floracraft Earliana. I discarded No. 10 several years ago, as I found strains or crosses of my own derived from Maule's Earliest, another Earliana strain, more to my notion. I am getting away from the old strain, however, and now and then secure a new stock for testing with mine. In tomatoes selection seems to be the great thing, and every gardener can do much in that line.

I found the "Coreless," one of Livingston's introductions, a most excellent, and really coreless, fruit. But the foliage was dense and vigorous to the point of being objectionable. The fruit is very large, very uniform and perfectly regular. We liked it first rate for canning and home cooking.

## The Seed-Books

Sensationalism seems to be going out of fashion with the respectable seedsmen. The general tendency is to cut out much of the overdrawn catalog pictures and the flashy coloring. Plain covers and moderation in expressions and descriptions are coming into favor. The business man who claims to be the only one who offers genuine and honest goods, the seedsmen who says that his seeds are ever so much better than everybody else's and that the gardener can raise good crops simply by planting his seeds knows that he is not telling the truth. Beware of the man who offers you the tomato that will give you ripe fruit in thirty days from planting the seed, or the melons that will weigh one hundred pounds apiece, or something similar.

## Poultry-Manure

A Detroit, Michigan, reader asks some more questions about poultry-manure. In what element is it richest? An average sample of the droppings of high-fed hens contains about thirty or thirty-two pounds of nitrogen, thirty pounds of phosphoric acid and fifteen or sixteen pounds of potash in each ton. This manure, therefore, is especially rich in nitrogen. But much of it is either diluted absorbents or weakened by leaching and exposure, and may not contain much more than half those amounts. We usually reinforce our poultry-droppings by scattering acid phosphate (a plain superphosphate) over them while accumulating under the roosts. This saves ammonia and enriches the manure with phosphoric acid. In applying it for garden, crops, especially cauliflowers, cabbages and such vegetables as require plenty of potash, I also apply with it a quantity of potash in the muriate form. For melons and the like, a good dose of superphosphate alone will be sufficient.

"What will be the consequence of putting too much in the soil?" is another of his questions. We can put so much of this strong manure in the soil that it will burn up the roots and kill the plants. We ought to first compost the manure so that it is fine and not in great soggy chunks, and then get it well mixed with the soil. I am not afraid of it, and apply it broadcast over the land with a shovel, just as it comes from the hen-houses during winter and spring, and even in summer. In the ordinary course of tillage it becomes thoroughly incorporated with the soil, and gives good results.

## Eradicating Horse-Radish

A California reader tells of covering an old horse-radish patch about six inches deep with well-rotted manure and leaving it on one season, thus effectively choking out the roots. He also killed a patch of Johnson grass by the same means after vainly trying plowing, spading and picking out the roots. There are many weeds easily disposed of thus, but it takes a lot of manure or other litter. I have often killed weeds out, root and branch, by heavy mulching between the rows with old corn-stalks, half-rotted straw, old weed-stalks and rubbish of all sorts. With horse-radish we have the advantage that when once killed out, it will stay killed, as it does not grow from seed like thistles and most other weeds.

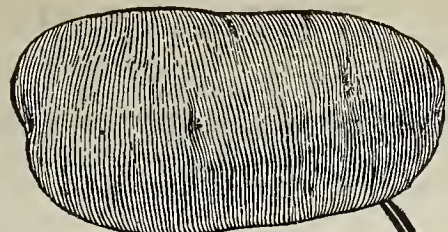
## Removing Strawberry Runners

A reader on Long Island, New York, asks me to name the best tool and method to remove superfluous runners in a strawberry-patch. The best method is not to have any surplus runners. I usually plant varieties which are great runner producers much further apart than sorts that do not have this tendency. Often I set my plants in new beds, if set in early spring, fully three feet apart, and with varieties like Michel's Early, which grows runners immoderately, even four or five feet in the row. If we set plants a little late, we will have none too many runners for a good matted row. Where we do have an excessive growth of runners we can do much with an ordinary wheel hoe, or even rig up some device—say a revolving disk at the side of a wheel hoe—which will cut the runners and narrow the matted row down to a reasonable width.

## Don't Get Discouraged

Perhaps your cabbages and turnips, like mine, were nearly ruined by plant-llice during the hot, dry weather of last fall. Perhaps your celery or your tomatoes were struck with blight or rot, or you had other insect enemies or diseases that made life a burden to you last summer. All that is no reason for you to give up. Many of these troubles are periodical. They may come one year, and nothing be seen of them in a number of years afterward. Aphids were very bad on apples in 1909. But we only have one season in five or six, or more, when they are troublesome. Last year brought few codling-moths and almost no celery blight. Flea beetles in some years came in swarms, puncturing our potato and pepper and egg-plant and tomato foliage. Last season we had but few, and these mostly on the Wonderberry. So we keep on planting and raising crops. We try to raise healthy plants under glass and give them a good start. Then they usually will get along very well and give us good crops. We do our share and trust in Providence.





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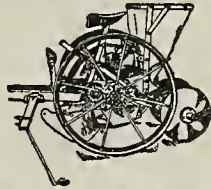
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## Fruit-Growing

By Samuel B. Green

### The Frost Problem

**I**NJURIOUS frosts occur most often in places where the air is still, especially in low spots into which cold air drains from the surrounding elevations just as water would. This can be seen especially at the time of the first severe autumn frosts. In such hollows, often called warm sheltered nooks, winter killing is the most serious. A wind-break may also make a frost pocket on the side hill by interfering with the free circulation of the air.

The locations where injurious frosts are least likely are elevations tipping to the north or east where growth is rather backward in spring, or places near lakes or streams which tend to keep temperature even.

Protection from spring and autumn frosts may be given in various ways:

(a) By covering up the whole plant and thus retarding its period of bloom until danger of frost is past. Strawberries and other small fruit may be covered with earth or mulch, peach-trees with corn-stalks or hay.

(b) By smudges which make a cloud of smoke over the land and thus prevent evaporation. This is effective when there is enough wind to spread the smoke. The material used is wet straw, tar, resin, etc., or a combination of such material, which may be burned in several places or carried about the orchard on a stone boat.

(c) By heating the air directly by means of fires, as is done in parts of Florida where wood is piled ready to be fired wherever frost threatens.

(d) By cultivating the land; moist soil is exposed, which furnishes considerable protection by the evaporation of the moisture from the freshly-exposed soil.

(e) By spraying the plants; the air is brought near to dew point and also warmed. In order to make this effective the spraying must be repeated during the night when frost is expected.

(f) By irrigating the land; the air is brought near to dew point and it is also warmed. This is frequently resorted to in the case of cranberries.

(g) By covering with tents, as practised in Florida and other places, and even by using stoves in tents.

(h) Covering the flowers with straw mulch at night is practicable in the case of strawberries. Where the mulch is kept between the rows to protect the fruit from dirt, it may be thrown over the plants when frost threatens. If the weather continues cold, it may remain for a few days without injury; otherwise it should be promptly removed.

### Protection by Whitening

The fruit buds of cherries and peaches, in the North, are liable to start a little in warm winter days and then be killed by a low temperature, although the leaf buds may not be injured at all. Among the most successful remedies is to bend the trees to the ground in autumn and cover them with corn-stalks. The tops are sometimes tied together and covered with corn-stalks or matting in winter. Experiments in covering the trees with various paint compounds to give an extra covering to the buds have had poor results. An ingenious way of protecting peach-buds has been tried by Professor Whitten, of the Missouri Experiment Station, who worked on the well-known principle that dark colors absorb more heat than lighter ones. He found that light colored peach-twigs were slower about starting into growth, and conceived the idea of spraying peach-trees with lime wash to prevent their starting on mild days in winter. He claims to have been very successful in this practice.

### Yellow Blackcap

L. Miller, Liberty, Kansas—The yellow berries resembling blackcap raspberries which you find in your grove are certainly interesting. They are probably black-cap, but the specimens are too small to judge satisfactorily. I wish you would send me a cane about two feet long. It may be folded up or even broken so as to go in the mail conveniently, but send with it all the buds and thorns on it.

In this connection, it may be noted that all blackberries are not black. We have a number that are reddish, even when ripe, and others that are nearly white, and of the blackcap raspberries yellow varieties are not uncommon. In raising seedlings of blackcaps we frequently find quite a percentage of them bearing yellow berries. Occasionally we meet berries that are purplish in color, generally crosses between the blackcap and the red raspberry.

### Norway Pine

The Norway pine is a native of north-eastern Minnesota, northern and eastern Wisconsin, and is often found on rather light soil and in dry situations. It is not as hardy as the Scotch pine, but it is standing well in western Minnesota and the Dakotas. In some portions of the Dakotas, however, it is necessary to give it wind protection in winter, as there are but few evergreens that will withstand the dry spring winds of that region. Perhaps the chief reason why this tree is not more generally used there is that seed of it is very hard to obtain. It produces reasonable quantities of seed, having good germinative value. The seed, however, ripens in the latter part of August, and the squirrels, being very fond of it, open the cones and destroy large quantities. The cones which open on the tree soon shake out their seeds, and, on account of the height of the tree, the cones are difficult to gather before they have opened.

### Grape-Vines on Arbors

J. H. O., New Haven, Connecticut—As a general rule, it is a good plan to cut off about five sixths of all the new growth on grape-vines growing on arbors, but to save enough so as to pretty well cover the trellis. The beginner in pruning is liable to save too much, and in such cases the vines become loaded up with old wood, and the growth made is small and often weak. If this is the case of your vines, I would suggest that you cut them back to five or six canes to each vine long enough to run up over the arbor. This will make a big growth of vines and completely shut out the sun except for a short time in early summer, although when the pruning is done it would seem as if it would be a long time before it would cover the trellis again.

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**LETTUCE, May King**, tender, delicious.  
**MUSKMELON, Rocky Ford**, the standard.  
**WATERMELON, Deposit Early**, earliest, sweetest.  
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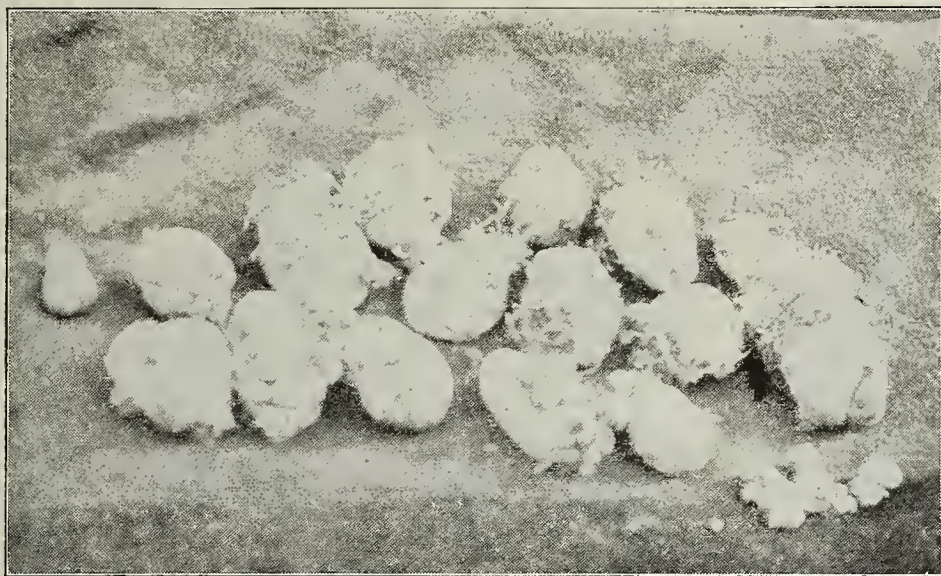


# Garden and Orchard

## A Struggle for Race Preservation

LAST spring a crate of potatoes of the 1908 crop, intended for table use, was left in the granary inside the barn and, being inadvertently covered with old sacks, forgotten until last fall (1909). When uncovered, the tubers were found to have made a determined effort to perpetuate the race. They did not have much chance to make top growth, but they had produced a lot of small potatoes, some (usually smaller ones) in clusters on the outside of the old tubers, around the eyes, and some,

been almost a complete failure the past season, and our friends may not be able to secure any or, at best, more than a very small quantity. When we have to pay forty-five or fifty cents for an ounce, and cannot get it by the pound at any price, we will have to cut our planting away down and fall back on the old Prizetaker. I must have some Gibraltar, on account of its size and sweetness, and somewhat gingerly I propose to plant the White Silver King, which is also large. It is the mildness and sweetness we are after in these onions. For growing ordinary dry onions, especially on a large scale, to be dumped on a general market



They Did Their Best

usually larger, but fewer in number, on the inside. I found one or two potatoes of walnut size sticking their noses out of old potatoes here and there, the latter having burst or cracked apart for the purpose. This determined struggle for the perpetuation of the race is rather interesting, and I have planted some of these immature, or dwarfish, tubers in the greenhouse to see if I can make a new crop from them.

This also reminds one that a number of years ago some genius came out with a new system of growing potatoes in the cellar, the system being based on this tendency of old tubers, when kept over in tight packages and a warm place, to make these efforts at propagation. I doubted then, and still doubt, that this method or system can lead us to anything of practical value in potato-growing.

T. GREINER.

## Garden-Pea Seed Scarce

I HAVE made it a practice to plant plenty of garden-peas. The newer peas, such as Dwarf Champion, Thomas Laxton, etc., are really delicious and an altogether different vegetable from the Marrowfats or other field sorts of earlier days, although these older sorts are still the only ones grown and used by many farmers. But there is another scarcity in garden-pea seed, and prices range from six dollars to over eight dollars a bushel. We must have them, however. Such prices must admonish us to make the most of the seed. We must plant these peas on better land even than we have usually given them. They can stand rich soil, and will bear all the better for it, and we can use a little less seed.

Garden-pea seed is always high, much higher than field-peas. The latter can often be bought at one dollar to one dollar and fifty cents per bushel. Garden-peas can seldom be bought from seed-dealers at less than from three dollars and fifty cents to five dollars per bushel. Yet I can raise a bushel of dry Thomas Laxton peas about as easily as a bushel of Canada field-peas. I have often gathered the vines after they had been picked over once or twice, or when we neglected to pick them close or at all, in a season of abundance, cured and thrashed them, and thus saved at least part of the seed for next year's planting. If infested with weevil, they are easily cleaned of them by using bisulphid of carbon. I am getting sick of paying these big prices for garden-pea seed, and shall take good pains to raise all that I may need for planting in 1911.

T. G.

## Sweet Spanish Onions

FOR growing onions by the method known as "the new onion culture" there are only two varieties that can come in consideration: The Prizetaker and Giant Gibraltar. Seed of the latter has

in the fall, or to be stored for winter, the old-fashioned way of sowing seed in open ground is the proper thing, and such varieties as Yellow Danvers and Yellow Globe are the proper varieties. Yellow Dutch, or Strasburg, is popular in some sections, and in the vicinity of Buffalo, New York, there is a strain of this that has a reputation for long keeping. It is called the Ebenezer, from the name of the town in which most of these onion-growers live.

T. G.

## Double-Faced Apples

I PRESUME you have heard of Luther Burbank claiming to have originated an apple part sweet and part sour. I have often thought of writing Luther that he was not the first one, for seventy years ago my father produced an apple, the green part of which was Rhode Island Greening and sour to the core, and the yellow part was Tallman Sweet and sweet to the core. I was ten years of age. When I was thirteen my father died. The graft was then bearing. My uncle told me that my father took a graft of Tallman Sweet with a fruit bud on it, split the graft through the bud, then fitted to it a Rhode Island Greening twig split for the other half of the graft, put them together and grafted them on a tree where they grew. I had never learned of any one that had seen or heard how they were produced until Burbank sent his out.

GEORGE HOUGHTALING.

## A Profitable Suggestion

WHEN you open the apple-pit in the spring, carefully select several of the choicest and solidest apples, wrap each one separately in paper, place them in barrels or boxes and set them away in the cellar or any cool, dry place.

This plan will enable you to enjoy delicious, raw fruit right up to the time the early varieties come on in the summer. Or, if you care to wrap several bushels and wait a month or two before selling them, you can realize fully twice as much for them as at picking-time.

M. ALBERTUS COVERDELL.

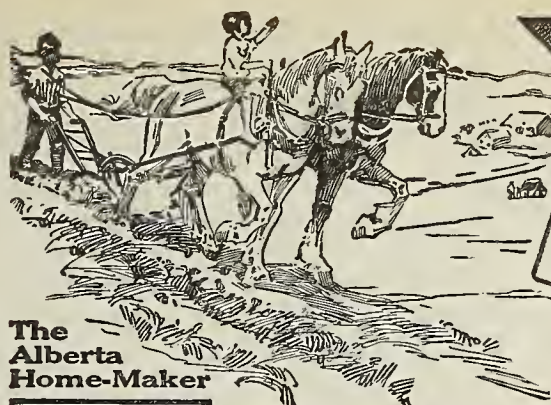
## Agricultural News-Notes

The yule-log burns the more cheerfully when the corn is all in the crib.

The apple crop in the Pacific Northwest this year is expected to yield the growers from ten to twelve million dollars.

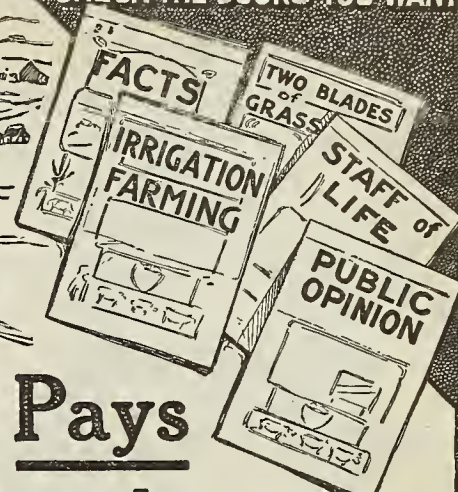
The production of sugar at the Chino beet-sugar factory in San Bernardino County, California, amounted to 22,237,000 pounds.

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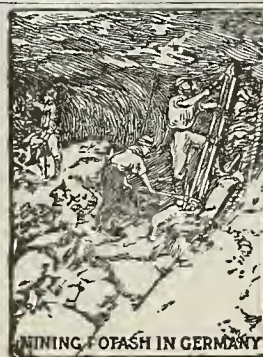
No. 1—"Facts"—Illustrated, showing agricultural conditions in Alberta's famous Bow River Valley on soil, climate, combination farm, production of cereals, Alfalfa, Timothy, Stock Raising and the small amount of capital required to start a farm. Every possible question answered for city man as well as farm dweller.

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## Live Stock and Dairy

### Feed and Care of Brood Mares

**H**ORSES, perhaps, require greater judgment in feeding than any other class of live stock, and the brood mares again, require better judgment than the rest of the stable.

Mares in foal should not be fed so as to make them fat, but rather to keep them in normal flesh. Since corn is of a fattening, heat-producing nature it should be fed lightly. Oats, of course, is the basis of any horse ration. A variety of feed should be given and occasionally a small amount of salt. As regards hay, clover is much better than timothy, but only about one half the amount should be given. Wheat-bran should be fed, mixing with it a small amount of oil-meal, as the time for delivery approaches; this prevents a feverish condition. If a brood mare is not receiving daily exercise there is no better feed than carrots. These act beneficially on the bowels and keep them regular and also improve the animal's condition.

The general health of the mare is much better and the colt much stronger if she is worked moderately. There are certain things that must be avoided when working the brood mare: (1) Keep out of mire holes in the spring. (2) Avoid sudden draft weight. (3) Do not drive fast or compel her to jump. (4) Keep her out of entanglements.

If there is not daily work for the brood mare, she should be allowed exercise in the lot or pasture, to keep the muscles strong. Such work as plowing and harrowing, if the ground is not too soft, will do no harm. It is advisable, however, to keep the mare out of the wagon, as the pole may cause injury. Excitement also should be avoided, and a sudden jerk often causes a mare to loose her foal.

JOHN J. BYRNE.

### Breeding for Beef

**I**N RAISING beef cattle one should pick the breed best adapted to his location. The bull, at least, should be pure-bred. The beginner too often buys inferior animals to start with, thinking he can build up his herd later. Ten females and a bull is a large enough herd to start with on one hundred and sixty acres of good land. The young stock should be put in good warm barns during the winter, and in the summer the little calves should be kept in the barn in a dry place away from the flies in the daytime and turned in a lot or pasture at night, with two feeds of grain per day. The grain should be a balanced ration of feeds that can be bought or raised the cheapest. My favorite ration for young cattle is one third ground corn, one third oats and one third wheat-bran, with a little oil-cake.

About forty acres should be enough land to have in pasture, if not too much other stock are kept on the same farm. For a herd of ten or fifteen cattle an acre of roots should be grown which will supply enough of this kind of feed if they yield as well as they should. Roots are not only of feeding value, but they help to maintain the animals in health.

The outlook of the beef-producer never was better. I do not mean by this that one should go into the business now and quit in one or two years, but go into the business and stay with it. There will be times when there is not much money made and times when there is large profit. Figuring on a basis of ten years, I do not possibly see how there can be a loss in the beef-cattle business.

The man who raises pure-bred cattle has two ways of making a profit. If he cannot sell his cattle as breeders he always has the market for them to go to the block, and it does not cost as much to produce the kind that bring the high price as it does to produce the less desirable kind.

O. F. TAYLOR.

### Foot Troubles in the Flock

**I**N a time of prolonged wet weather there is often in some districts a good deal of lameness among sheep. This is because the soft ground does not wear down the hoof as it grows, and consequently it becomes overgrown and liable to injury. This is not true foot-rot, but if neglected produces a very troublesome condition which is practically indistinguishable from foot-rot. Sheep with black hoofs are more liable than others to this condition, on account of the toughness of the black hoof.

When lameness is observed, the hoofs should be trimmed carefully, removing all loose horn without drawing blood as far as can be avoided. A strong, sharp

knife is required. Immediately after trimming, the sheep should be walked through a trough containing at least an inch and a half depth of a solution of bluestone, one pound to the gallon. If a number of sheep are treated they will take up a good deal of the solution, which must be kept a sufficient depth by renewals. This is all that will be required in cases attended to early.

When the complaint has gone on to suppuration, with extensive decay of the hoof, the case will give a good deal of trouble. Probably the most satisfactory dressing will be a mixture of Burgundy pitch and bluestone.

For the removal of proud flesh a caustic is required, the most satisfactory being butter of antimony.

W. R. GILBERT.

### The Pony Colt

**A** MAINE subscriber wants to know when to break the pony his boys are to ride. The best time to break a pony is when he is one year old. The first step of course, is biting—getting him used to the bit and accustomed to mind it promptly and without resistance. Begin by attaching a long line to bridle and making him go around in a circle, first one way, then another, finally using a pair of reins. Do this until he is thoroughly bitten. Then harness him and drive about the yard a few days. Last of all, put him into a light breaking-cart, with long shafts made of saplings cut in the woods; have a kicking-strap over him.

A pony that age breaks very easily, but you must be very careful not to hurt or overtire him. Be gentle and patient and give him short lessons, often repeated. His bones and muscles will be too tender for much use for some time even after he is broken, but it is wise to break early. Our correspondent does not state breed or size. Break to saddle when he is big enough to carry the boys.

If he is a Shetland or Iceland or of any far-north breed, feed plenty of hay, but little grain at present. When old enough to use, feed a little grain—three or four quarts a day.

DAVID BUFFUM.

### Worms in Horses

**H**ORSES that are poorly kept and become reduced in flesh are very liable to become wormy. Here is a simple remedy that has been fully tried and proven to be a first-class corrective of that condition. Thoroughly mix a teaspoonful of pulverized smoking-tobacco with a ground feed of corn or bran two or three times a week and give it to the horse. It will expel the worms, improve the horse's condition and make the hair glossy.

It is said that this remedy will not injure a mare with foal, but it pays to be very careful about giving any medicine to mares in that condition.

It is also claimed that a liberal supply of oats in the ration helps to keep the bowels free from worms.

W. D. NEALE.

### The Horse That Wastes Hay

**I** do not like the overhead manger, but I had a horse that wasted so much hay that the overhead manger seemed the only solution till I hit on a novel idea. Strips nailed across the manger about eighteen inches apart would keep him from throwing the hay out all right, but it made it difficult to get the hay in. In order to obviate this difficulty, a framework like a ladder with hinges should be attached to the top of the manger, hinged onto the side toward the stall. Throw this back, fill the manger with hay, then let the frame down again. The horse can reach through or between the crosspieces on the frame, but cannot get his head far enough to throw the hay out, which is usually done by a quick movement of the nose.

H. F. GRINSTEAD.

## Marlin



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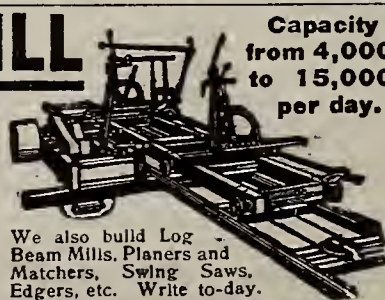
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# Live Stock and Dairy

## Merits of Sussex Cattle

Few breeds of British cattle can trace back their origin further than the Sussex. As long ago as 1795, they were recognized as a well-established breed of very high repute, remarkable for the fineness of their hides and the closeness and delicacy of their flesh.

In the olden time in England, as even at the present, the steers were largely used for draft purposes in cultivating land and hauling logs for which these powerful oxen with their constant and steady pull, were admirably adapted. An advantage, however, that the expert buyer and breeder should fully realize has resulted from this practice of working the oxen; it being necessary that they should have thoroughly sound constitutions the breed has gained the capability of withstanding the rigors of cold and exposure and of furnishing a good carcass of beef after the close of its working career. They are esteemed as one of the hardiest of breeds, and for their ability

exercise are essential. He should have some grain the year around of a strengthening rather than of a fattening nature. If possible provide a tightly-fenced yard or lot for him and turn him in it daily. If taken in time, almost any bull can be trained to do work such as drawing a cart or running a tread-power, thus adding to his usefulness and giving him at the same time the very best kind of exercise.

At an early age a ring should be put in his nose, and from the first he should be fed and handled by it. It teaches him at once that man is his master, and goes a long way toward establishing a gentle disposition. But never lose sight of the fact that however quiet a bull may seem, he is always an uncertain animal and must be watched. Failure to recognize this has been the cause of many horrible tragedies.

Do not take any risks. Handle the bull quietly, but always firmly. Do not encourage the youngster to be playful with his head. It is but a short step

steer means, for if winter continues severe there will have to be a great advance in price to justify doing so. From practical experience, I know it is hardly possible to hold weight on an animal on hay alone in the three months of January, February and March. It, therefore, takes no great brain work to figure that if an animal eats one and a half tons of hay between the time of this writing (January 15th) and grass with no gain, it will have to sell for something more than prevailing prices.

For example:

|                                 |         |
|---------------------------------|---------|
| 900-pound steer, at \$4.50..... | \$40.50 |
| 1½ tons hay .....               | 15.00   |
|                                 | \$55.50 |

This means that the nine-hundred-pound steer goes on grass at over six cents per pound and brings us back to the question if it is paying to keep an animal this winter on merely a maintenance ration; I am sure it is not. No



Typical Sussex Individuals, English-Bred, Owned in This Country by Mr Overton Lea, Nashville, Tennessee. The Bull, General Roberts (500), Was a Notable Prize-Winner at English Shows

to thrive and do well under the most unfavorable circumstances as regards feed, soil and climate, being practically free from disease.

Since the establishment of the Herd Book in England in 1855 there has been a gradual decrease in the number of working oxen, so much so, indeed, that at present they have become almost a thing of the past. This fact has, however, enabled the breeders to pay greater attention to the rearing of animals particularly adapted to beef production, and a notable improvement has been effected in the fleshing quality and symmetry of the breed without any loss of those important qualities, soundness of constitution and hardiness.

The breed has been confined to a comparatively small area, but it is noticeable that the area is one in which two of the leading breeds of British sheep, the Southdown and the Romney Marsh, had their origin. These two, bred under the same climatic conditions as Sussex cattle, have made a name for themselves throughout the world. The most successful way of breeding is to calve them down in October and let them have their own calf through the winter, which can be weaned in the spring and another calf put to the cow. By this method a cow rears two calves and rarely proves barren. Breeders maintain early maturity to be a Sussex characteristic, a claim which is strongly supported by the live weight gains that are reported at the big shows.

Where they are known nothing sells as well as, Sussex cattle, and the same may be said in regard to their crosses, which are more and more sought after.

The breed is more or less of a rarity on this side of the Atlantic. In Tennessee, however, it has been said that the introduction of Sussex cattle, in the eighties, proved an unqualified success. The animals of that state stood the crucial test of yielding a good return over the cost of production, and one year the champion yearling steer at the American Fat Stock Show was a Sussex. Besides the breed has done its full share in the improvement of the native cattle of the region.

W. R. GILBERT.

## Show the Bull Who is Boss

OF EQUAL importance with the breeding and quality of the sire is his handling in service. On his health and stamina depend his ability to transmit to his offspring health and strength, and with them the physical characteristics for which he was chosen. A liberal supply of strength-giving food and plenty of

from a playful toss to a very hard blow.

I never allow my bull to run with the cows. In the season I allow but one service a day. Never under any circumstances should more than two be allowed. This is one secret of long usefulness in the herd bull. It is a matter so generally neglected that a large majority of bulls are worn out at the age of five years, when their real usefulness should be only beginning. O. F. TAYLOR.

## Consult the Hog's Taste

THIS is an old subject, but it is one that should ever be kept before the minds of farmers. There is no condition powder so efficient in maintaining the health of the herd of hogs as salt and ashes. It has been our custom for years to use them for hogs, and there has never been a case of cholera in the herd. I do not know whether it is the potash or the lime that the hogs enjoy and that is so healthful to them, and it does not matter. Since the hog craves the mixture, it should be supplied and in liberal quantities. It is a good plan to keep it where the hogs can have free access to it at all times. The best place is in a large covered box with holes near the bottom from which the hogs can secure what they want. They will never eat more than their appetites call for or more than is good for them, unless they have been deprived of it for a long time, in which case they are liable to overdo.

Wood-ashes are preferable to coal, and some farmers make it a custom to burn pits of charcoal and ashes for their hogs. Sows and young pigs that are confined in close quarters especially enjoy charcoal, ashes and salt mixed. It contributes to their thrift by preventing disease. Fattening hogs should also have a supply, for it keeps their bowels free from worms and aids digestion.

W. D. NEALE.

## Stalk-Fed Steers Won't Pay

OWING to the extraordinary winter we have had so far, hay and roughage for live stock is now selling for a high price and promises to go still higher. Cattle that in ordinary years would have wintered in the months of November and December on corn-stalks have had to be fed the hay that was intended for March and April, and no matter how fine the weather may be the rest of the winter, this loss cannot be redeemed. It, therefore, behooves every farmer to get his pencil out and figure a little on what wintering a dry cow, heifer or

man can afford this winter to let any animal stand still. If not worth feeding, get rid of it—the sooner, the better, and don't worry if your pasture is idle for a few months.

There will be a chance to eat up that grass at a profit some time next fall or winter—fortunately all winters are not alike.

Many of our farmers worry over their pastures going to waste in the early spring and summer months; but how often the pastures are short in August and September at the very time, after the fly season, when cattle are ready to put on their greatest gain.

No man can forecast what the market will be, but the chances are that the man who buys good, heavy cattle next August and sells them in November will be paid for his corn fed on a luxurious pasture which has been allowed to be idle during the early summer.

We have had here at Sioux City, to my knowledge, three different shipments of cattle recently, said cattle having been on full feed from seventy to ninety days and they only show a gain of thirty to thirty-five pounds per head. What do you suppose cattle fed only on hay or corn-stalks have done? Get your pencil out—it's time to figure.

W. S. A. SMITH.

## Breeding-Herd Pointers

Avoid extremes, neither the warm, poorly-ventilated, dark stable, nor the stormy outdoors is the place for stock.

Succulent foods prevent constipation and assist the animals' digestive systems in getting more nutriment from their dry forage and grain foods.

Avoid crowding the breeding-ewes and brood-sows. They will thrive better if divided into separate bunches where they will have more room to eat and exercise.

Corn-ensilage is the best and most economical form of succulence for the dairy cow and other cattle, but root crops are preferable for horses, sheep and swine.

Abundance, variety and succulence should never be lacking in the winter rations of breeding-animals. Feeding too much corn and other heat-producing foods brings disastrous results.

Ensilage should not be fed to breeding bulls, boars and rams, except in limited quantities, for there is a general opinion among stock-breeders that too much ensilage has a tendency to injure their breeding qualities. W. MILTON KELLY.



## THE 1910 DE LAVAL CREAM SEPARATOR

In keeping with the established De Laval custom of making the De Laval Cream Separators as much better each year as possible, the De Laval machines for 1910 show even greater perfection than they have in the past.

The dairy farmer who buys a 1910 De Laval can feel assured that he has by far the best cream separator ever made anywhere at any time.

The dairy farmer who lets the year or even the month pass by without at least seeing and examining the 1910 De Laval will be doing himself an injustice.

The opportunity of examining and trying a 1910 De Laval right at his own home is open, free of all cost or trouble, to every dairyman who will simply say the word.

Next to a De Laval machine is the De Laval catalogue, free for the asking and containing a separator education in itself.

**The De Laval Separator Co.**  
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42 E. MADISON ST. CHICAGO  
DRUMM & SACRAMENTO STS. SAN FRANCISCO  
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Absolutely the best wagon built for every kind of heavy teaming. Low steel wheels, wide tires. Will last a lifetime without repairs.



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Send name, today, for Big Free Book and new Cut Prices direct from our factory—for a latest-improved Quaker City Mill Feed Grinder that will just fit your needs. Our liberal

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Watson E. Coleman, Washington, D. C. Books free. Highest references. Best results.

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MINERAL HEAVE REMEDY CO., 425 Fourth Ave., Pittsburg





## ARE YOU SATISFIED WITH A 20 ACRE CROP FROM A 40 ACRE FARM?

**Y**OU know it costs as much in time, labor, seed and implements to raise a poor crop as it does to raise a good one. You know also that unless your land is kept constantly supplied with lime, nitrogen and phosphates and the ingredients of barnyard manure it becomes worn out and loses its fertility.

You know further that it costs more and trebles your labor to spread manure by hand than it does to use a well-made manure spreader.

Maybe you don't know that one load of manure evenly spread by a mechanical spreader is worth four loads scattered by hand—

And that your crop, whether rotation or continuous, will be increased from 20 to 40 per cent if you use an

## I. H. C. Manure Spreader

Made in three styles as follows:

**The Corn King, Return-Apron Spreader.**

**The Kemp 20th Century, Return-Apron Spreader.**

**The Cloverleaf, Endless-Apron Spreader.**

I. H. C. spreaders are made of the best material—wood and steel. They have powerful steel frames and steel-bound boxes, which damp manure cannot rot.

I. H. C. spreaders are easily drawn. They can be adjusted to spread a thin or heavy coat with equal evenness.

I. H. C. spreaders are so simple in operation that a boy can do the work which used to require a strong man.

An I. H. C. spreader will save you in time and labor more than enough to pay for itself in one season.

Your increased income from better crops will be clear profit.

Scientific experiment has proved that this profit will vary from \$4.00 to \$20.00 per acre.

You cannot afford to be a half-crop farmer and there is no reason why you should be one.

An I. H. C. Spreader will give you the full return from your land, whatever the size of your farm.

Call on our agent in your town and talk the spreader over with him, or address us directly for catalogue and other information.

INTERNATIONAL HARVESTER COMPANY OF AMERICA  
CHICAGO, U. S. A.



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LOOK FOR THE I. H. C. TRADE MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY.

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### FOR CLEANEST SKIMMING

More prominent, practical dairymen and breeders use and endorse U. S. Separators than any other make.

These many long-headed business dairymen use U. S. Separators, not because some blaring advertisement has hypnotized them into buying, because it's "cheap." Sound reasoning of its many superior advantages only persuaded them. The best will always have the best.

## THE 1910 INTERLOCKING STYLE U. S. SEPARATOR

is emphatically the Best and the only one for you to Buy.

- Because,
- 1st. It skims the cleanest.
  - 2nd. It's built the strongest.
  - 3rd. It's the easiest cleaned.
  - 4th. It's the most convenient.
  - 5th. It requires the least power.

The U. S. Separator has repeatedly proven its superiority over all other separators in open contest and daily use. It defeated all other separators at the Alaska-Yukon-Pacific Exposition, at Seattle, on these five essential points and

## Won Grand Prize 1909

Beautiful Illustrated Catalogue No. 69 will give you all information.  
**VERMONT FARM MACHINE CO.**  
BELLOWS FALLS, VT.



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I will furnish the advertising matter and the plans. I want one sincere, earnest man in every town and township. Farmers, Mechanics, Builders, Small Business men. Anyone anxious to improve his condition. Address **COMMERCIAL DEMOCRACY, Dept. D19, ELYRIA, OHIO.**

## Free and Clear to Your Depot on 30 Days' Trial

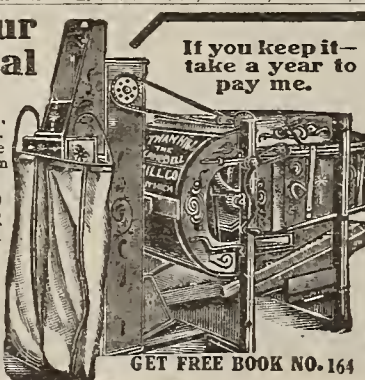
**NO MONEY DOWN—NO CONTRACT**

This big money-maker is yours, for 30 days' use, anyway, no matter where you live, without a penny of expense to you. I'll pay the freight. I don't want any money in advance—any deposit—any contract. All I want is your permission to ship you a—

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Then, if you want to keep it, pay me my bedrock, factory price—on easy terms. I think you'll want it for keeps when you know how fast it makes money by giving you clean, graded seed to plant and sell. One means full crops—necessary when land is so high; the other means top prices when you sell. **MY FREE BOOK, No. 164, will tell you all about it.** Send your name and address, now, so I can make you my remarkable offer. Ask for Book No. 164. Use nearest address.

Manson Campbell, President, **THE MANSON CAMPBELL CO.,** Detroit, Mich.; Portland, Ore.; Kansas City, Mo.; St. Paul, Minn.



GET FREE BOOK NO. 164

## Home Pasteurizing

**P**ASTEURIZATION is a method of treating milk to kill harmful organisms and arrest the work of others. Milk is one of the best foods for man, but it is just as good a food for bacteria; they are always present in it, and increase at an enormous rate, unless checked. Hence Pasteurization.

In sterilization the milk is heated to boiling, which kills the germs at once. In Pasteurization the heat does not go so high, and the germs die more slowly; hence the process must be longer continued. It is not as efficient as the sterilization, and yet it answers practically all of the purposes and does not impart a burned or scorched taste to the milk. After Pasteurizing, the temperature should be lowered, as some germs may survive, or new ones get into the milk; a low temperature will not kill them, but will prevent their multiplying.

Usually, where cream or milk is Pasteurized in the creamery it is passed quickly over a heated metal surface and then flows into a cooler. The apparatus often consists of a tank with hollow revolving disks. In the first compartment of the Pasteurizer these disks are filled with steam or hot water, and in the second cooling compartment with cold water.

The milk attains the high temperature quickly and is held there about a minute. When held a minute the temperature of the milk should be at least one hundred and sixty degrees Fahrenheit. The same end may be accomplished by heating the milk to a lower temperature and holding it there longer. Heating to one hundred and forty degrees for twenty minutes will kill even the rather resistant tuberculosis bacilli.

The apparatus described above is too expensive for the ordinary dairyman, but there is no reason why he cannot Pasteurize cream or milk, and have it keep much longer than by the ordinary way of handling it. Many of the up-to-date dairies send out milk that has been aerated or cooled down in a tank of cold water as soon as it is drawn. But the next step of Pasteurization is seldom taken.

If it is desirable to Pasteurize a small amount of cream or milk it can be placed in an ordinary milk-can and the can sunk in a vat or tank of water as near boiling as possible. The water should extend nearly to the top of the can—at least as high as the milk comes inside. Then the milk should be stirred with a tinned stirrer until the temperature is even throughout. After the temperature has reached one hundred and fifty degrees pour cold water into the vat or tank to one hundred and fifty degrees, until the temperature of the milk stops rising, and hold the milk and water at this temperature twenty minutes, stirring well. Otherwise, the milk will tend to form a film over the top and this will contain some bacteria that will not be killed.

A dairy thermometer suitable to the job costs about twenty-five cents.

After the milk has stood at one hundred and fifty degrees for twenty minutes, the water in the vat or tank should be replaced with cold and the milk again stirred until the temperature of the milk is about fifty degrees.

When it is desired to keep milk for home consumption for any length of time it can be readily kept by Pasteurizing it, which can be done in the kitchen with very little trouble by heating on the stove and using the cold drinking-water to cool it.

EDWY B. REID.

## Make Chums of the Heifers

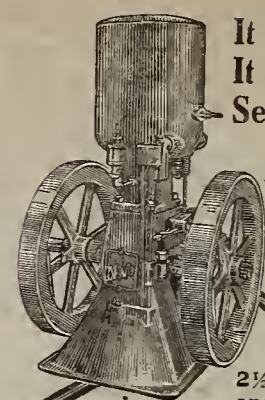
**W**E ought to be on friendly terms with all the calves, but especially with the calf we intend to add to the dairy herd when she becomes old enough.

We should pet, curry and brush her while she is young. Let's handle all of her feet, and stroke her on one side, then on the other. We want cows that won't flinch at being touched anywhere on the body—cows that never have learned about "the right side."

We'll never lose the time it takes occasionally to slip the halter on this hope of the future herd and teach her to lead, while she is young and easily trained; but if we wait till she brings her first calf before we break her, she'll be so strong, and so unused to being handled, that she may be as unruly as a bucking broncho.

Along with all this training we must give the calves some extra care and plenty of proper feed. They must not be made to "rough it" with the grown cattle. A snug, warm place should be so arranged for them that the larger stock cannot molest them, nor cheat them out of their full share of the feed. Good, dry bedding is another pressing essential. Then, there should be a variety of clean, small-grain feeds, cracked corn and fresh, bright roughage. All these will keep the little Bossie moving right along toward the development of an ideal addition to your dairy herd.

M. A. COVERDELL.



It Pumps Water  
It Saws Wood  
Separates Cream  
Grinds Feed  
Sprays Trees  
Washes  
Churns

Does any such thing for you.

2½, 3½ and 5 H. P.

## THE FARMER'S HELP

But there is something beside the right amount of horse power to look up in buying a gasoline engine. There are a number of very important improvements (not in other engines) which have been made in the

# NOVO

## Gasoline Engines

For instance, you get all the advantages of a water cooled engine but don't have the nuisance of a separate tank.

The Novo is frost-proof—guaranteed against injury by freezing. Every working part of the engine is heavy, but by keeping unnecessary pig iron out of the base the Novo is lighter and easier to move.

The Novo always pulls more than promised. It picks up quickly under a load.

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(it's free) and full of engine information

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## TUGS CAN'T JERK OR WORK LOOSE

You are doubly protected by the Fernald Double Trace Holder. Tugs are always held tight by this patented grip. Cheapest accident insurance on earth.

You can attach it in five minutes. Mud or snow can't clog it. Costs so little you can't afford to be without it. Best dealers everywhere.

Ask your hardware or harness dealer or write us.

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is built on the most approved plan and material that gives lasting service.

Free Sample and Catalog.

**ANCHOR FENCE & MFG. CO., Dept. D Cleveland, O.**

## WANTED—Able bodied young men over 23

years old for CONDUCTORS and MOTORMEN. Must be sober, honest and able to pass an examination. Steady work. References required. Write, giving full particulars, to

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## Post-Cards Without Cost

We will send you the complete set of 21 Roosevelt in Africa post-cards if you will send us 10 cents each for two 3 months' trial subscriptions to **FARM AND FIRESIDE**. The two trial subscriptions must be new subscriptions. Send the 20 cents for the two subscriptions in coin or stamps.

**FARM AND FIRESIDE**  
Springfield, Ohio

## 15000 Bu. EAR CORN

Ground very fine with one set of Rollers and Concoaves used in the

## "BULL DOG"

Grinds all grain perfectly fine and is very light running, because all work is done only 1½ inches from center of shafts. Sizes 2 to 50 h. p.

Get our Catalog.

**CROWN POINT MFG. CO.**  
135 E. Road, Crown Point, Indiana



# Live Stock and Dairy

## Your Bargain With the Cow

MANY seem to labor under the mistaken idea that the scales and Babcock test are all that it is necessary to use in weeding out the unprofitable cows from their herds. The scales and test tell but half of the story. Some cows give a fairly large milk and butter yield, but are not economical producers. Others may not give as much milk, but are economical producers. After you have determined each cow's individual output, you must have some way of getting at her individual cost of food. In these times of high-priced feed this factor is especially essential.

A cow does not need to be a great feeder in order to be a profitable producer. A cow may be a rather light feeder and still digest her food so perfectly as to produce as much as a cow that will eat twice her amount of food; it is the first cow we want to keep.

You should keep track of the number of pounds of food and its market value, and the amount of milk and butter, so that you may figure what each pound of butter costs, just as you would figure if you had a separate account with each cow in your herd. To weigh each cow's milk or feed each day would be impractical for the average farmer, but to weigh each milking one day each week and to weigh the food the same day would bring approximate results, adequate for all practical purposes. Of course the weighing of hay and fodders would not be so absolutely correct as with grain foods, yet it would enable you to make very accurate estimates.

The important thing we are after is to determine which of our cows is the lowest producer under the same conditions. Now, from the records kept during the year, get the number of pounds of milk produced; then look up her test and figure the number of pounds of butter; then, from the cost of feeding her, figure the cost of producing each pound of butter. In this way you can figure what each cow in your herd produces a pound of butter for.

Sell those that produce a pound of butter for thirty cents and keep all that produce a pound for fifteen cents. There are few dairymen who are not keeping cows that require thirty cents' worth of feed to produce the same amount of milk or butter that other cows in their herd produce for fifteen cents.

There are many other points to consider in determining the individuality of a herd of dairy cows, but the three points from the money-making side of the question are the quantity of milk, average per cent of butter-fat and the cost of the cow's food. A little trouble, a little time and a little thought applied to this matter of "cost accounting" would pay the farmer as well as it pays the city manufacturer.

W. MILTON KELLY.

## This Doesn't Pay

A SUBSCRIBER at Hyde Park, Ohio, writes that his seven cows are only giving one large bucket of milk altogether. The butter made from it is so strong it will not sell. The cows get bran, besides fodder and all the hay they will eat; they drink from the creek. They are only milked once a day. The owner wants to know what is wrong.

From the description of the care given the cows it can hardly be expected that they will be either a source of profit or pleasure. It is not advisable to milk cows only once a day. If they were good producers and were being fed, watered and cared for properly they would be in misery for several hours daily on account of holding milk so long. Some dairymen milk three times a day, especially when the cow is fresh, in order to relieve the pressure from the udder and to stimulate a still larger and more profitable milk flow. Yielding such small amounts as they do there is little danger of injury to these cows except that they will have a tendency to go dry.

It is certainly poor policy to send the cows to a creek in zero weather to drink. The water must be heated to the temperature of the body and it would seem to the writer that, with feed as expensive as it is this winter, it would be more profitable to have a tank heater and warm the water with wood or cobs rather than with hay and bran.

Bran and fodder, although good feeds when used in conjunction with other food-stuffs, are not conducive of good results when fed by themselves.

The butter being strong is partly due to the fact that the cows are not receiving proper care and treatment. Very likely

it is also due to foreign bacteria that have gained access to the utensils with which the milk and cream come in contact. These utensils should all not only be washed clean, but each day should be scalded thoroughly and set out in the sun to air.

Now for what to do: Determine to care for the cows properly or get rid of them. Kept under the conditions named they are a source of loss, and all the feed and care given them is wasted. One good cow should give as much milk as these six are giving. If the determination is to keep them, get a tank heater and bring their water to a temperature of sixty degrees, and they will drink more water and with more pleasure, and at once there will be an increase in the milk flow. Milk them twice a day at regular times, and there will be a further increase.

As to the feeding, it will be well to continue giving them all the corn-fodder and hay they care for. The hay should be clover, if possible. A grain ration should also be given. A good mixture is corn-meal, two hundred pounds; bran, one hundred pounds; oil-meal, gluten feed or cotton-seed meal, one hundred pounds. This should be fed in such amounts as is needed by each individual cow. To determine how much feed a cow needs it is necessary to weigh the milk, and then by weighing the feed provide for the milk flow accordingly. You can tell a good deal, also, by the way she cleans up her feed.

Farmers are realizing the value of a silo more this winter than ever before. Rations cost much less where corn-silage is largely used. HUGH G. VAN PELT.

## Memoranda

The mechanical condition of clover and alfalfa may be greatly improved for swine by running it through a cutting-box and steaming it or soaking it in hot water and mixing it with their slop.

A change of food is beneficial, for the animals tire of one kind of food and many times get off their feed by being confined to too narrow limits. All changes should be gradually made, to prevent injury to their digestive systems.

When it is possible, I prefer to make up my rations for breeding-animals from home-grown foods, because many of the by-product grain foods contain elements that hurt the breeding qualities of the animals. Some of our best veterinary authorities voice the opinion that many cases of abortion in dairy herds are caused by these abnormal nitrogenous by-product foods. W. M. K.

**\$15.95**  
**AND UPWARD**

## THIS OFFER IS NO CATCH.

It is a solid, fair and square proposition to furnish a brand new, well made and well finished cream separator complete, subject to a long trial and fully guaranteed, for \$15.95. It is different from anything that has ever before been offered. Skims 1 quart of milk a minute, hot or cold, makes thick or thin cream and does it just as well as any higher priced machine. Any boy or girl can run it sitting down. The crank is only 5 inches long. Just think of that! The bowl is a sanitary marvel; easily cleaned, and embodies all our latest improvements. Gears run in anti-friction bearings and thoroughly protected. Before you decide on a cream separator of any capacity whatever, obtain our \$15.95 proposition.

**AMERICAN SEPARATOR CO., BOX 1058, BAINBRIDGE, N. Y.**

## Look for the Steel Keg at Painting Time



Spring painting time will soon be here and buildings will need one or more coats of pure white lead and linseed oil, for livening them up or to save them from decay. We have a special word for those who have used our white lead before and could not be induced to use anything else in their painting.

It is about our new steel keg. This is a new package this year and takes the place of the long familiar oak keg. The white lead is the important thing, but knowing the package insures your getting the genuine material. Please look at the illustrations below—the new kegs are of steel, gun-metal finish, and come in two shapes as pictured. The one-hundred pound size has parallel sides; the smaller sizes taper toward the bottom.

Steel is the ideal material for packing white-lead-in-oil for paint purposes because, not being porous, it does not absorb the oil, and the lead always stays moist. The three smaller sizes named have bails and, being steel and seamless, they make the finest kind of utensils for various purposes after the white lead has been used. Liquids can be boiled in them.

To be sure of getting absolutely pure white lead, look for the Dutch Boy Painter on the side of the new steel keg.

**Color Schemes and Suggestions:** For those contemplating painting we have a package of helps, including books of color schemes, giving artistic ideas for carrying out color harmony both for interior and exterior painting. Free. Ask for "House-owners Painting Outfit 47."

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(John T. Lewis & Bros. Co., Philadelphia) (National Lead and Oil Co., Pittsburgh)



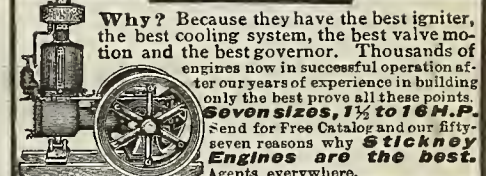
## Watch While You Sleep



This trap keeps out back water, sewer gas and all insects at all times, "it is guaranteed." Write for particulars to

**The Meier Cellar Drain Trap Factory,**  
Upper Sandusky, Ohio Please Mention Farm and Fireside

## Stickney Gasoline Engines ARE THE BEST



**Charles A. Stickney Company**  
MAIN OFFICE & FACTORY, ST. PAUL, MINN.  
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## THE LOW DOWN AMERICAN SEPARATOR

### EXCELS ANY SEPARATOR IN THE WORLD

OUR LIBERAL TRIAL ENABLES YOU TO DEMONSTRATE THIS. While our prices for all capacities are astonishingly low, the quality is high. Our machines are up to date, well built and handsomely finished. Run easier, skim closer, have a simpler bowl with fewer parts than any other cream separator. Thousands of machines in use giving splendid satisfaction. Write for our 1910 catalog. We will send it free, postpaid. It is richly illustrated, shows the machine in detail and tells all about the American Separator. Our surprisingly liberal long time trial proposition, generous terms of purchase and the low prices quoted will astonish you. We are the oldest exclusive manufacturers of hand separators in America and the first to sell direct to the user. We cannot afford to sell an article that is not absolutely first class. You save agent's, dealer's and even catalog house's profits by dealing with us and at the same time obtain the finest and highest quality machine on the market. Our own (manufacturer's) guarantee protects you on every American Separator. We ship immediately. Western orders filled from Western points. Write us and get our great offer and handsome free catalog. ADDRESS,



# I'll Start You Raising Chickens With This 120-Egg Incubator Freight Prepaid—For \$7.50



Write For Low Prices On Larger Sizes—Freight Prepaid

I AM quoting lower prices on Ideal Incubators, delivered, this year than I ever thought I could possibly offer you. Yet my Ideals are better this year than ever before. And this is why: They are metal-covered all around, front, back, sides, top and bottom, encased in best grade, 28-gauge galvanized iron. That means that the Ideal is the absolutely safe incubator; also, that it holds the heat as no other incubator can; insures an even temperature and saves oil.

I can sell just 20,000 of the 120-egg size at this price, freight paid. So you had better write me now. The 20,000 will be cleaned out in a few weeks at this startling price. I can't make more at that figure this year. I planned this big scoop on the incubator business months ago. No one else could have arranged the cost of production as I arranged it, owing to my scoop on materials, labor and manufacturing facilities. If you are to be one of the 20,000 to get this bargain, write me now. I'll send my big poultry book free—the best published, and my cut prices and freight-paid offer on all sizes of my

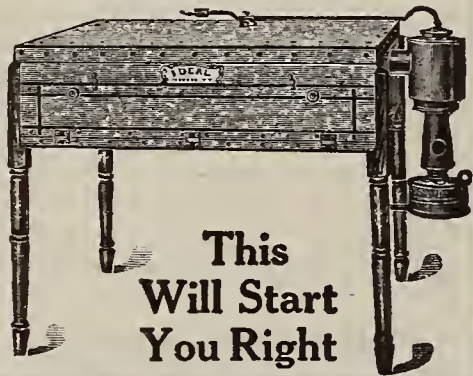
## 1910 IDEAL Incubators and Brooders

Never before have quality hatchers been sold for prices that even approach mine—and remember, I pay the freight. And the machine I'll send will be complete, ready to use; no extras to buy. Years of service have proved the Ideals to be record-breaking hatchers; and the new model, encased in galvanized iron, sets a still higher standard of perfection. Made by experts, of the best materials money can buy; absolutely safe; automatic regulator; guaranteed to hold even temperature during entire hatch; automatic ventilation—the simplest to operate; most durable and best finished.

I ask you to find more value, at any price, if you can.

I am prepared to quote you the only really cut prices of the season.

And I'll pay the freight to your depot.



This Will Start You Right

### Big, Free Book Poultry For Profits

contains my 30 years' experience as a poultryman; over 20 full-page illustrations of Standard-Bred Poultry, all breeds; other fine cuts; all printed on best of paper. Tells what Ideal Incubators and Brooders have done for others and what they are guaranteed to do for you.

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Just say, "Send your Free Book, 'Poultry For Profit,' and your lowest prices on Ideal Incubators and Brooders of all sizes." If you ask me to, I'll put aside one of the 120-egg size machines for you for a few days, at my special price, so you can get all the facts out of the book before you decide.

My freight-paid offer of \$7.50 on this machine is the same to all on shipments to points east of the Missouri River and north of the northern boundary of Tennessee. If you live beyond these lines, write for my lowest price delivered to your R. R. Station. Better write at once, or take down the address now, to remind you. Address J. W. Miller, President,

J. W. MILLER COMPANY, Box 31, FREEPORT, ILLINOIS

### WARD FARM FENCE

40 carbon spring steel, extra heavily galvanized. 30 days' free trial. Freight prepaid. Complete free catalogues on Farm, Poultry and Ornamental Wire and Wrought Iron Fences. Write now for special offer. The Ward Fence Co., Box 306, Decatur, Ind.

### SHOEMAKER'S BOOK ON



### POULTRY

and Almanac for 1910 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickenhood. You need it. Only 15c. C. C. SHOEMAKER, Box 725, Freeport, Ill.

### 125 Egg Incubator and Brooder Both For \$10

Why pay more than our price? If ordered together we send both machines for \$10.00—freight paid east of Rockies. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery underneath the egg tray. Both Incubator and Brooder shipped complete, with thermometers, lamps, egg-testers—all ready to use when you receive them. All machines guaranteed. Incubators are finished in natural colors showing the high grade lumber used—no paint to cover inferior material. If you will compare our machines with others offered at anywhere near our price, we will feel sure of your order. Don't buy until you do this—you'll save money. It pays to investigate the "Wisconsin" before you buy. Send for the free catalog today, or send in your order and save time. WISCONSIN INCUBATOR CO., Box 79, Racine, Wis.

## Poultry-Raising

### Variety in the Chicken-Yard

"VARIETY is the spice of life," runs an old adage. It is as applicable to diet as well as to environment, habits, apparel. Coining an antithesis, it may well be said, "Monotony is the potion of death." Mince-pie tastes good, but what if one were compelled to eat it interminably? Dyspepsia! Fowls may have dyspepsia as well as humankind, and that fatally.

Resolving poultry-foods into three classes, which combine into a balanced ration, we have cereals, animal products and vegetation, including vegetables. The first two are highly concentrated and nutritious when properly digested. The vegetable foods are digestants, and serve to give bulk to the other two, besides containing valuable food properties of their own.

### Japanese Millet

I had some very convincing results from feeding Japanese Millet last fall. I pronounce it one of the finest supplementary foods for chickens of all ages from less than a month old up. The hull of this millet is unlike that of other millets, and the whole grain produces an admirable mottle among the birds and a glossy plumage without excessive fat. I feed this millet in the straw, and the happiest chick is the one that can bury himself the deepest in the litter scratching and searching for the rich, tiny grains which do not fill him at once to satiety. Here he learns the habit of industry in his confinement. If a fowl lingers at the poultry-yard gate for five hours waiting for a heavy feed that is to be gulped down in two minutes it is not his fault. Give him something to interest him in the meantime. Let him get busy and forestall an attack of dyspepsia, and he will appreciate his regular meal just as well and will not realize himself to be the dependent that he is. Of all supplementary foods that I have ever tried, Japanese millet comes the nearest supplying interesting busy work and promoting health.

### Sunflower-Seed

Sunflower-seed is pretty widely known as a food supplying food for plumage, bone and shell. In this respect it is very like Japanese millet and is excellent for alternating with the same, but, of course, cannot be fed to small chicks. While feeding the two alternately through the last molting season I had a very perceptible increase in egg-production and the highest standard of health among my birds.

### Sugar-Beets

Another satisfactory diversion is the proper feeding of sugar-beets. They are far more nutritious than mangels, easily digested and are always sweet, crisp and tender. Old mangels are frequently

tough and woody, and hard for a fowl to pick at. A young fowl finds it easy to feed from a suspended sugar-beet, and it satisfies his hunger. Enough sugar-beets may be swung about the poultry-yard to give the whole flock a faithful day's work.

### Other Supplementary Foods

Beef-scraps, ground bone and milk are widely known as producers of health and eggs. But let it ever be remembered that it is variety, as well as sufficiency, that keeps fowls courageous and happy in confinement—variety of food, variety of action. It makes for tone and vigor, increasing their natural proclivities to the satisfaction of their keepers.

I have an exhaustive, varied program each day for my flock of sixty hens and pullets. The passer-by readily notices their unusual thrift for confined fowls. In all quarters of the yard is action—singing, scratching, dusting or playful combat. But the occasion of my own particular gratification is that number on the program being enacted inside the poultry-house—cackling anon and anon.

L. C. SEAL.

### The Cause and Cure of Roup

IN A recent poultry paper it was stated that the open door is the cause of colds and roup troubles. I think it is a mistake that cold air is a cause of colds. Roup was practically unknown when fowls roosted in trees or under the open wagon-shed, and it came in with the tight hen-houses. I have never had many cases of roup in my flocks, excepting one winter when I kept the hens in the tightest house I ever had. It was double-boarded and lined with tar-paper, had lots of glass in front, but very poor ventilation. I had the house a little overcrowded, but was calculating on lots of winter eggs; instead, I got a good run of roup and no eggs.

The main causes of roup and kindred affections I believe to be the lowering of the vitality of the bird by improper feeding or otherwise and impure, damp air of a tight hen-house. Plenty of ventilation is the remedy for both dampness and impurity, for they both are in the exhalations of the fowls.

Drafts are incidentally a cause when these conditions of warmth, dampness and impurity exist, and only then. An open door is one of the best means of ventilating a poultry-house during the day, and a partially-raised window or muslin front at night if the house is so tight as to have no cracks. I aim always to have the back (or north) and sides of the house tight, while the front may have a few cracks in it as well as not. The scratching shed or house with open door, with plenty of dry litter for the fowls to exercise in is the great preventive of colds and roup.

If roup appears, prompt measures should be taken. The affected birds must be separated from the well ones, and if not too far gone may be successfully treated. The houses should be thoroughly cleaned out and disinfected, and kept dry and supplied with plenty of fresh air; ten to twenty drops of tincture of iron in a quart of water should be given. A change of diet helps. In the worst cases, however, I think it by far the best plan to kill the affected birds and bury them, for the disease is very contagious.

A. E. V.

Cure is secondary to prevention, with roup. The disease varies so much in its severity that treatment helpful in one flock may be useless in another. A good deal of the trouble that passes for roup is simply cold, which disappears after simple treatment, or none at all. The real thing does not yield so readily. One stand-by treatment is dipping the bird's head in mild disinfectant—a moderately strong solution of permanganate of potash—a light red color indicates about the right strength—will do. Others recommend swabbing hydrogen peroxide or other mild disinfectant onto the sore patches in the mouth and throat.

All these methods require a good deal of detail work, and unless the bird is particularly valuable, the hatchet treatment is the surest and safest to the rest of the flock. If you have the time, roup cures are worth trying, but only after the sick fowls have been separated from the well ones or, better still, the healthy birds shifted to quarters free from the disease.

It may be worth while to inquire whether there is any farm building in which animals are kept which does not need thorough ventilation. Do you think of any?

EDITOR.

## THE WELD at every contact point THAT HELD



In comparing wire fences do not be led into the error of considering weight per rod as a measure of strength. Remember that 8% to 19% of the weight per rod of any wrapped or clamped fence is in the wraps and clamps, which add nothing to strength, but detract from appearance, effectiveness and durability. The gauge of wire is the thing to judge by.

The selling price of any other fence made from the same gauge wire is greater than the price of the

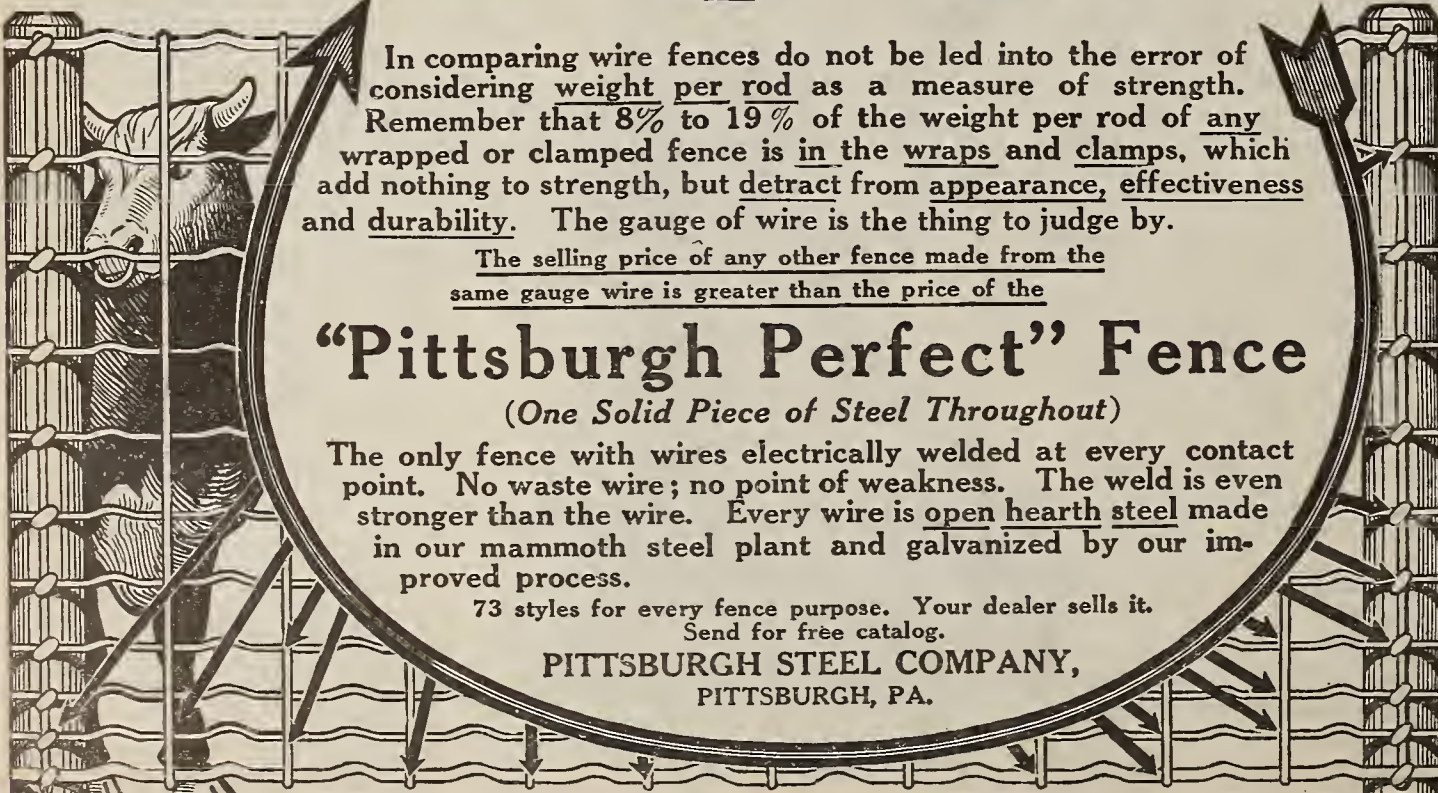
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# Practical Poultry-Raising

## Early Chicks

**W**HETHER intended for market or for layers it pays to hatch chicks early if one is prepared to care for them properly. March hatches, if given close attention, good feed and comfortable quarters, bring prices as broilers that fully compensate for the extra work entailed.

The greatest difficulty with these early hatches is to keep an even temperature in the brooder-house. Little trouble should be experienced in keeping the incubator at proper heat, as it may be run in the kitchen or, better, in a dry cellar. But when the chicks are hatched they cannot be kept in the cellar, because there is no sunlight, and it is very inconvenient to have even a few in the kitchen. They should be placed in a room that is well lighted, comfortably heated and large enough to allow them some space to run about.

We use a room ten by twenty-four feet, dividing it into compartments for several broods by setting twelve-inch boards on edge across the room. In each pen is a hundred-chick size outdoor brooder. We have found it advisable not to use these brooders outside before fairly warm weather, but in the brooder-house they answer very well. They are heated by oil-lamps that send the heat through a galvanized iron pipe running over the hover. The lamps are not alone depended upon, however. A small heating-stove is used, and by keeping a little fire in it day and night the room does not become chilly and there is no danger that the chicks will catch cold by coming out of a warm brooder into the cold room. Frequently it is not merely cold that causes chicks to die, but the suddenness of the change from the seventy or eighty degrees of the brooder to the cold outside air which often is below thirty.

Forty to fifty chicks is as many as we allow to a brooder, though it is supposed to be large enough for a hundred. A larger number of chicks in one flock are much more difficult to manage than two small flocks; they are apt to crowd too close under the hovers, and, in feeding, the weaker ones will not get their full share of food.

We feed the early chicks just the same as those hatched later. For the first few days corn-bread finely crumbed is fed five times a day. The bread is made of four parts corn-meal (coarse) to two parts wheat-bran, mixed with water or milk and baked brown. After the first week a mixture of ground and small grains is kept in shallow troughs where the chicks can help themselves. Sweet milk is fed every day. We used to soak the corn-bread in milk, but it caused too much bowel trouble, so we no longer moisten any of the food. The best of all green food is fresh lettuce-leaf. It is easily grown, a small plot furnishing enough for several broods, and it is greatly relished by the chicks.

Fresh water, grit and charcoal are before the chicks always. Broken china is excellent for grit, but if many chicks are to be supplied it requires too much time to pound up china, and it will pay to buy prepared grit. An inch of sand is spread on the floor of each brooder, while the compartments outside have a layer of short straw, hay or leaves for the chicks to scratch in. Chicks like a dust bath as well as hens do, so a box of dry dirt should be provided.

We clean out the brooders daily. Nothing is more certain to result in disease than unsanitary quarters. It requires only a few minutes to lift the hovers and clean the brooder floors, raking the top layer of sand off and putting in more as required.

NAT. S. GREEN.

## Incubator Moisture

**F**ROM long experience with incubators I have learned the following in regard to ventilation and moisture: It is not safe to take the air cell as a guide in determining ventilation, and it does not always indicate when moisture should or should not be applied. Chicks get out of the shell with all sizes of air cells. The charts, showing the size the air cells should be, are totally unreliable, as the cell grows larger until near the end of the hatch when it becomes smaller again.

Incubators having the outlet for ventilation at or near the bottom require less ventilation than those having it near the top, as little oxygen is required by the growing embryos, while it is of vital importance that the heavy carbon dioxide thrown off by the eggs be gotten out of the machine.

Incubators that carry a current of air

through them usually require applied moisture, while those that heat by radiation only and have but one opening for both the outgoing and incoming air, retain the moisture which is evaporated from the eggs. When moisture is to be applied it is better to put in a small pan at the beginning of the hatch than too rapidly dry down the eggs and then supply moisture to bring them back to normal. Evaporation is slow at first and can be kept uniform throughout the hatch by checking it at the start. There is enough moisture in the egg if we do not waste it by excessive evaporation.

Hygrometers for determining the humidity of the air are of little use to the average operator.

The best place for an incubator is in a room or cellar where the temperature does not vary greatly. It does not matter whether it is damp or dry, so long as the air is pure. Sixty degrees is the best temperature for an incubating-room. More chicks are killed by overheating during the fore part of the hatch than by any other cause. They usually die about the seventeenth day. If there is not enough heat the chicks will die in the shell, but will usually live overtime.

A. E. VANDERVORT.

## The Polish

**T**HE Polish is not what one would call a farm variety; but it is likely to hold a permanent place in the affections of poultry-fanciers. It has a good many utility qualities. The birds are spry,



A Fine Golden Polish Specimen

hardy, and healthy. They are good layers in spring and summer, and non-sitters, which gives them a chance to make up for their deficiencies as winter layers. They never gain great size, but the fine quality of their flesh makes it popular.

For the commercial poultryman, they will hardly do; their mop-like crest holds wet and, in all but the best individuals, hangs in their eyes, and makes them hard to care for. The small flock-owner, however, who is in the business for pleasure in combination with profit, is likely to find in the Polish a kind that will suit him.

H. H. GREGG.

## Fireless Brooders

**F**OUR years ago some of my outdoor brooders became infected with lice. The next season I had to tear out the whole insides of them and apply hot whitewash to get rid of the lice, after which I used them for brood-coops.

Last season I converted one of them into a fireless brooder. In one half of it and about seven inches from the floor I built a platform of matched half-inch pieces. In the center of this I fastened one of the wire cylindrical chick-guard from one of the old brooders. Then I took one of the old circular hovers and tacked rows of slitted felt over its entire surface and about an inch apart. This was placed in position on the cylindrical chick-guard as in the old brooder. The holes in the top of the hover gave good ventilation. The other half of the brooder makes good space for feeding and exercise. From this to the top of the platform goes a runway, fixed on hinges to close at night.

Out of the first brood I tried in it I only lost one in thirty. In cool, damp weather the hover is taken out and thoroughly warmed. The chicks are given a sunning whenever weather permits.

A. E. V.

## Another Poultryman's Plan

**A** READER asks for dimensions of a fireless brooder. Mine are built nine feet long, three feet wide and eighteen inches high, with a partition running crossways dividing the brooder into two equal parts. The hovers are eighteen inches square and eight to ten inches high.

The number of cloths over the hover

is regulated according to the temperature. In cold weather more covers are required than in warm weather.

There are two hovers, one for each room of the brooder. The front is glass, to give light. The cover is hinged on, so that it can be raised when the air is warm, or closed when it is cold. A sheet-iron covering over the lid is preferred.

Fifty chicks can be accommodated in one hover while young, but when they get up a little they must be divided and given two hovers.

A. J. LEGG.

## Poultry-House Ventilation

**A** NEW YORK poultry-man asks: "Which is the best way to ventilate a poultry-house? Mine has a shaft from the roof to within a foot from the floor, funnel shape."

This question of ventilation is one as yet unsettled satisfactorily between poultrymen. Many favor the funnel-shaped ventilators as you describe, while others declare they circulate the air too freely about the fowls on the floor. Ventilators placed on the floor or near it will not do; fowls succumb quickly to cold air circulating about their feet. Ventilation to be perfect must come from above them, therefore sliding or adjustable ventilators in the roof or in a ceiling below the roof are considered best by the majority. Lately many have taken to building their poultry-houses with a sliding or hinged window placed so as to not throw drafts upon the fowls, the opening covered with thick muslin, which gives plenty of ventilation.

MARY SHEPLER.

Take the eggs to market before they begin to look shiny. Shiny eggs are always suspicious characters.

We used to think morning was the time for the warm mash, but is it not more reasonable to think that if you send your birds to bed with a gizzard full of nice warm mash they will be more comfortable through the night than they would on cold corn or other grain?

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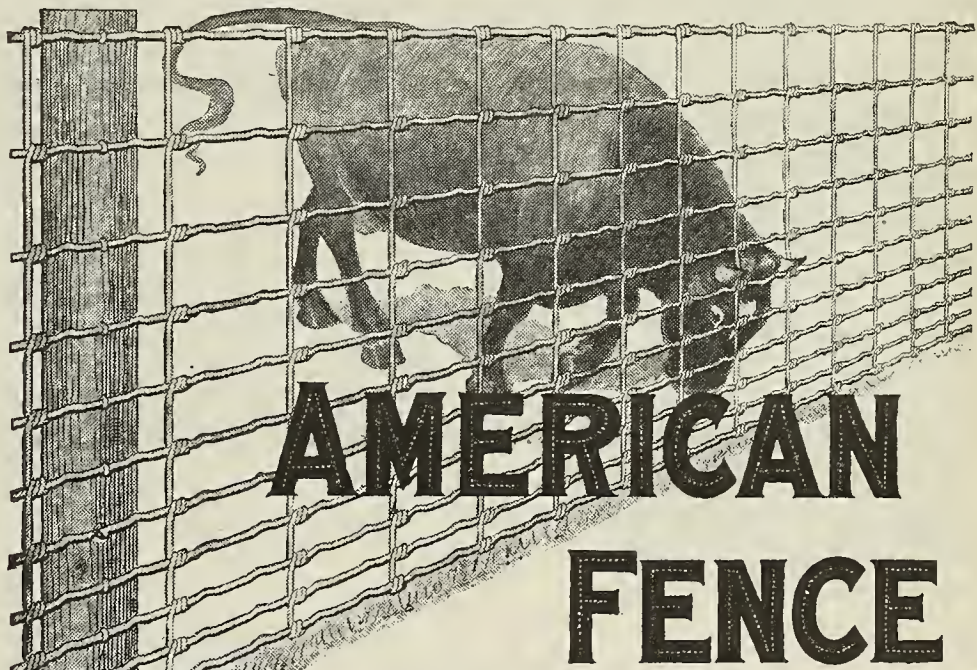
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## Poultry-Raising

### Ducklings From Shell to Market

Two points are essential for the foundation of a profitable duck flock: The eggs must be from strong, healthy breeding stock, and they must be well hatched.

Duck-eggs require four weeks to incubate. They usually begin to pip the shells on the twenty-seventh day and they should all be out by the evening of the twenty-eighth day. You will observe that they are unlike chickens, who come out of the shells very soon after they are pipped. Sometimes ducklings will break the shells twenty-four hours before they hatch out; they require more time than chicks.

If an incubator is used, keep the temperature as near one hundred and three degrees as possible, turning the eggs twice a day and allowing them to air or cool once a day, till they feel quite cool to the touch, but still warm when applied to the cheek. After the twenty-sixth day they will need no more turning. When they begin to pip the shells, the temperature may be allowed to rise to one hundred and four degrees but no higher. The increased heat will help the ducklings in their efforts to liberate themselves.

Let the ducklings remain in the incubator from twelve to twenty-four hours after hatching to dry off thoroughly and become strong on their feet, before removing them to the brooder, which should be heated to about ninety degrees previous to receiving them. Keep the temperature at ninety for the first week, then it may be gradually lowered about five degrees each week.

After the fourth week they will not need much artificial heat during the day except in cold spells. Place the brooder where they can get the sun and you will be surprised to see how they will prefer sun heat to brooder heat.

After removing the ducklings to the brooder offer them their first meal of fine, sharp sand and lukewarm water. This supplies them with grit and gets their digestive organs in condition to receive their first food, which is a mixture of one part cornmeal, one part middlings, two parts wheat-bran and one tenth sharp sand, fine oyster-shells or chicken grit. Mix this with sweet skim-milk or warm water until the food is well moistened, but not sloppy. Feed this ration four or five times a day for the first three weeks, after which meat, meal or scraps may be added, about one tenth part at first, gradually increased till at seven weeks they have one fifth meat without danger of bowel trouble. At three weeks old they should also have cut grass or clover-meal, in bulk about one third, though if the ducklings can have green grass in their yards they will pick up all they require. Never leave feed to sour in the troughs.

To keep the ducklings from wandering use movable fences made of twelve-inch boards with stakes driven on either side to keep them in place. These can be changed once a week to fresh grass ground. If you have not grass ground enough, a good green food can be quickly grown by sowing rape broadcast. Do not allow the young ducks to have water to swim in, as they will not grow as rapidly nor fatten as quickly and their meat will not be as tender. Always keep fresh water before them, however, to drink and dip their heads in, especially at feeding-time, as they must have drink while eating.

Ducks must also have shade in the warm summer months. If you have no shade-trees drive posts to project about two feet above ground and nail poles or slats horizontally on top, covering them with boards, canvas or anything to keep off the scorching midday sun.

Ducks that are fed and cared for by this rule will dress from three and a half to four and a half pounds when eight weeks old, and should be marketed when not older than ten weeks, as they pluck easier, look nicer and bring a better price in the market than at any other time. Keep their roosting-places well cleaned, as they will lose as much by roosting in a dirty, foul place at night as they will gain through the day with the best of food.

A. E. VANDERVORT.

### A Treat for Young Poult

IT is a very hard matter for many people to feed the young turkeys and get them started in life successfully. More than fifty per cent of young turkeys hatched out and lost are lost during their infantile period, and chiefly from faulty feeding and poor rations.

One of the best methods of accumulating a ration for the young poult is practised much here among our housewives, and consists in brushing from the kitchen and dining table the accumulation of crumbs, thoroughly drying them in the oven and storing them away in paper sacks for feeding the young poults. The feed is thus made up of mixed crumbs and condiments, and makes a finely-balanced ration for feeding the infant birds, and they cannot help but thrive upon such a diet.

Crumbs sufficient for feeding quite a large flock of infant poults may be saved from an ordinary dining-table in a few weeks, and when properly cured out by heat will keep indefinitely. After five or six weeks the ration can be widened, and as soon as the poults begin to forage for feed, the ration is no longer a question for the housewife upon the farm where grain is plentiful.

GEO. W. BROWN.

### Utility, Not Fancy Points

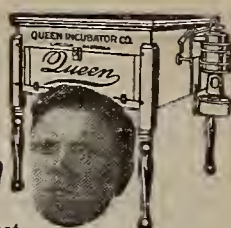
IN SELECTING poultry for the farm flock, utility points should have first consideration. Unless we are expert breeders and have adequate equipments, I believe the returns in meat and eggs will be larger from breeding stock that is strong and vigorous, even though they may not be perfectly feathered.

I practically ruined one of the best flocks of general-utility fowls that I ever owned by paying a long price for three male birds from one of the leading fanciers in the East. This convinced me that fine feathers do not always make fine breeding birds and I have always had much better success buying my male birds from some farmer poultry-breeder, who allows his birds free range and breeds them along general-utility lines, as many do in developing their flocks.

There is another great danger in buying birds from a flock that has been too highly developed along meat or egg producing lines alone, until the stock becomes so specialized that practical general utility has been lost sight of.

W. MILTON KELLY.

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with every machine. Has double wall with heavy wool felt lining. Perfect hot water system. Copper tank, self-regulating lamp and thermometer. No trouble. Less oil needed. Ventilation perfect, insuring big healthy hatches, strong healthy chicks. Substantially built—best material. Stands years of use. Built on scientific principles by experienced men. Each machine thoroughly tested before shipment. Biggest money maker out. Pleasant, easy work. Start in independent business. Demand never supplied. Advance does all the work. You just take profits. Begin now. Don't wait. Be first in the field. Make these big profits. Never will opportunity be greater. Never a better time than now. Remember our guarantee is back of every machine. **CATALOG FREE. WRITE NOW.**

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I am well pleased with my incubator. I have had three hatches averaging 100 chicks from 110 fertile eggs. —Mrs. E. J. Birkhead.

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I wish to say that the Advance is perfection. Out of four hatches it averaged 90 per cent. The chicks were all strong and healthy. I raised all of them. —W. H. Weslor.

I must tell you how well I like the Advance Incubator. I made three hatches with it. One gave 96 per cent; one 92 and one 100 per cent. Who can beat this record? —Mrs. J. G. Dell.

I had never seen a real incubator till I bought one of yours. It beats everything in town. There are five others here, but the Advance tops them all. —Henry Stevens.

I think the Advance Incubator purchased of you is fine. My chickens are as strong as any I ever had. You are at liberty to use my name as reference. —Mrs. D. D. Parish.

The Advance Incubator I bought of you last Spring has given perfect satisfaction. In three hatches we hatched nearly every fertile egg. It is a pleasure to use the Advance and I feel I can highly recommend it. —S. Berge.

**ADVANCE MFG. CO. Box 35, Dayton, Ohio**



OUT-DOOR BROODER



# Practical Poultry-Raising

## The Woman Poultry-Keeper

SOMEHOW it seems that on most of the farms of this country the men folks are not very good hands to take care of poultry. Why this is, nobody seems to be able to find out; we have to take the fact as it stands and let it go at that. The women are the poultry-keepers of the farm. They have the tact and the patience and the love for that kind of work which enables them to make far more out of it than do the men.

But the women might do a great deal better than they do. This is so true that very little argument is needed to back it up. Some of the farm women folks are waking up to this fact, too, and they are making things hum.

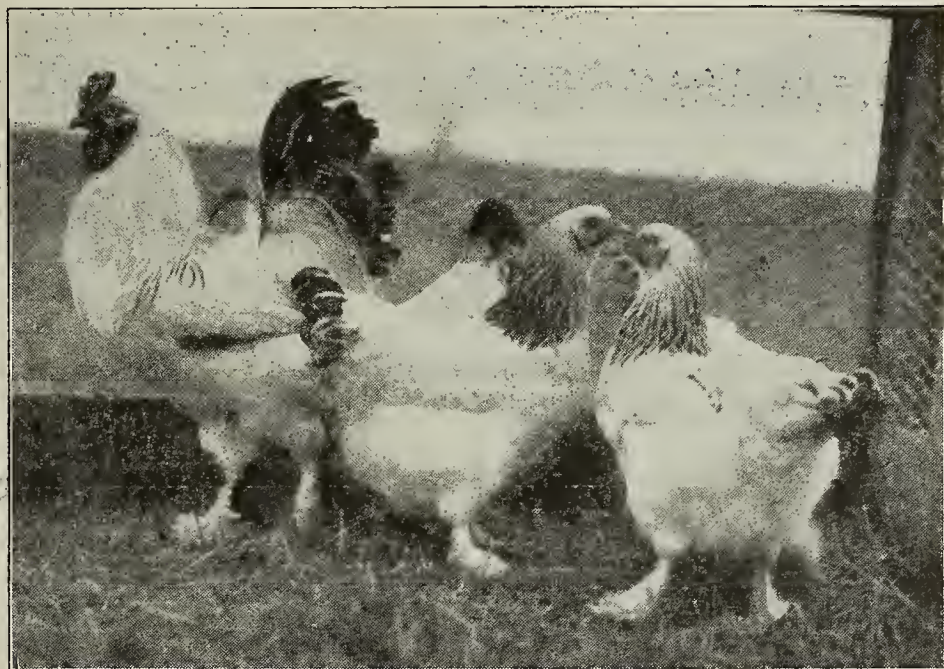
The other day a man called on me with a confession that did me good and added some facts that made me more sure that

glad enough when their wives make poultry-keeping a success. Then they come around and tell how well they have done, and maybe they take some part of the credit to themselves; but wouldn't it be a little more square if they would lift when the wheel is fast in the mud and their wives need the helping hand most of all?

Now wouldn't it? E. L. VINCENT.

## Stifling the Vermin

SPRAYING or whitewashing to kill nits and lice are effective, but troublesome. This method is easily applied and brings sure death to vermin. Close the house tight and set fire to about one and one half pounds of brimstone in an old kettle. It will burn about two hours. Start it at noon and keep the house shut till night. Open and air it well before let-



Light Brahmas—A Prize-Winning Pen

the farmer wives of this country are coming to the front in a way that is going to work a revolution with us soon. This man admitted in the first place that he hated hens as he did poison. He would not let them come into the barn or anywhere else that hens love so well to go. He simply left their care to his wife. How did she make out?

So well that at one of the poultry exhibitions held in a large city, after looking her hens over, a man drew out his check-book and offered the lady three hundred and fifty dollars for a pen of five.

The farmer man thought that simply great, and he nudged his wife and advised her to take the money on the spot; and he was a little bit out of patience when she turned the man off, saying quietly, "No, I guess I won't take it!" When afterward he hauled her over the coals for refusing an offer like that, she said, "I will sell eggs enough to make that money!"

And she did and had the hens left after it was done.

Now that could have been done in only one way. The woman had hens worth the money. She had spent years in breeding up her stock until she was not ashamed to put it by the side of any in the country. She would have met with only failure if she had pinned her faith to the common stock of the farm.

This, then, is the lesson. Weed out the hens that do not bring in much, if anything, above the cost of their keeping. How many there would be in that list nobody can tell, for we never have opened up an account with each individual hen and made her show what she is doing for the country. When we do that, there will be a clearing out in the farm chicken-yards.

Again, we need better houses and more of them. It is a mistake on the part of the farmer man to pinch his wife in respect to commodious and comfortable hen-houses. I know they sometimes feel that it is little less than highway robbery on the part of their wives to demand first-class houses; but if the wives just hold steady, don't talk back much, but let the results speak for them, the time will come when the husbands will be glad to acknowledge their wisdom.

By the way, that man I spoke of above told me with something of pride in his voice that his wife was last year on the institute force of their state speaking twice a day to the farmers and showing them how they might better their condition, so far as keeping poultry on the farm is concerned. Oh, these men are

ting the hens in. Next morning examine the roosts and destroy what vermin have crawled off the hens. Examine again three days later and three days after that. If there are any vermin, burn brimstone and examine as before. If the house is not tight and the lice are thick, it may take three doses to clean them out. Clean the nests, also, and sprinkle some sulphur-flour in them. This system has never given me a failure.

My roost-poles are loose so they can be removed easily. The shelves under them are on hinges and covered with old thick paper, so when cleaning the house, I let these drop and the paper slides off, leaving the shelves clean and dry.

SILAS BICE.

## Harking Back

SOME call it harking back, some taking back, and some any other name handy—and some of our old poultrymen don't believe in it at all.

What I mean is this law that marks the later offspring with the looks of the father of the offspring of the first mating. I know there are intelligent people now who declare this law will not hold good, and that people of old who believed in it and were so watchful over these first matings, lest an impression be left upon all future progeny of the animal, were simply mistaken.

My experience is they were not mistaken, although the danger of this impression being handed down is so slight in certain breeds as to scarcely be worth more than making a scientific note of.

At one time, when introducing Buff Orpingtons into my poultry-yard, and getting rid of Buff Cochins, I allowed the Cochins to remain over in the yards until the Orpington pullets were farther advanced in maturity than I guessed. Some time before they began laying I got rid of the Cochins males and introduced Buff Orpingtons. And what a time as I had with the flock that followed, until I got rid of those hens. In every hatching of their eggs would appear a goodly number of chicks with slightly-feathered legs.

Because the Orpington of this variety is at least half-blood Buff Cochins, these chicks might be thought to have harked back to original stock instead of carrying an impression of the first mating; but then, why did they not do so in the yards from which I bought my stock? They declared they had never had a feather-legged Orpington here, and neither did I find any on examination.

Last winter I allowed a pure-bred Spangled Hamburg rooster to circulate freely in a flock of very young Buff Orpington pullets for a little while before selling him. I was very sure these pullets were a long way from laying, but they began earlier than I expected. I used none of their eggs for hatching purpose until nearly three months after. Now what did I find in fifty young pullets hatched from those eggs, laid long after the Hamburg male had gone? Two rose-comb pullets and two showing not only the Hamburg shape and small size, but the dark fluff feathers of the Hamburg, with a few dashes of white. There was no chance for a mixing of breeds at any later time. Surely here was proof, to my satisfaction at least, that one must be very careful in this matter.

MARY SHEPLER.

## Grow Your Own Feeds

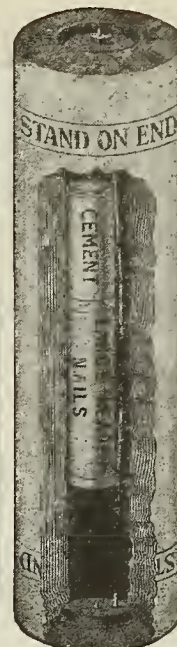
THE real profit from the poultry-yard does not come altogether from the high price obtained for the product. Profits are measured by the difference between receipts and cost of production. It is not the gross amount of money received, but what the net amount that is saved over and above the cost of production that counts.

That is all very elementary; nevertheless, there are plenty of poultrymen who do not understand it. At least it would seem so from the small amount of thought they put on cutting down the cost of production. Better methods, better housing, better stock and cheaper food mean a lowering of cost of every dozen eggs and every pound of chicken-meat.

In no way are we able to cut down the cost of production in a more effective manner than by growing our own grain. This is not practical with all, but with many it can be practised to a much greater extent than is common. I hear the remark almost every day, "I can't make much from hens, even if eggs are high, feed costs me so much. Feed certainly is high and will eat up a large part of the profits if you continue to buy it from the feed-store. Grow it or, if you cannot do that, go to the producer direct."

VINCENT M. COUCH.

The colder it gets, the harder the birds ought to work. Deepen the litter on the floors, hang the cabbage a little higher and make them hustle for all they have to eat. It is the price of eggs.



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Acid and Alkali Proof.  
Elastic and Pliable Always.  
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Absolutely Waterproof.  
Climatic Changes Do Not Affect It.  
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of pure bred poultry, for 1910, 200 pages, handsomely illustrated, 150 engravings, photos, 30 fine colored plates, describes 65 leading varieties of land and water-fowls, gives low prices of stock, eggs, incubators, poultry supplies, etc. Calendar for each month. How to care for poultry and all details. Only 10 cents. Send to-day. B. H. GREIDER, Box 62, Rheims, Pa.



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That is what we guarantee you can do with the **Invincible Hatcher**. Try it and if it don't produce more strong, healthy chicks than any other incubator, regardless of price, send it back. **50-Egg Size Only \$4.50.** Same low prices on larger Hatchers, Brooders and Supplies. Write for 176-page **FREE** catalogue. The United Factories Co., Dept. X48, Cleveland, O.

## 14 1/2 Cents a Rod

For 22-in. Hog Fence: 15 3/4-c for 26-inch; 18 3/4-c for 31-inch; 22c for 34-inch; 25c for a 47-inch Farm Fence. 50-inch Poultry Fence 33c. Sold on 30 days trial. 80 rod spool Ideal Barb Wire \$1.55 Catalogue free. **KITSELMAN BROS.,** Box 271, MUNCIE, IND.

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is success and satisfaction with a

## Sure Hatch Incubator

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We couldn't afford to make the guarantee we do, and the Bankers' Surety Company would not back our guarantee with their good cash if the **Sure Hatch Incubator** were not the best built, most dependable incubator on earth.

The Double Redwood Walls with the Dead Air space between for insulation, the Dependable Hot Water Heating System, the Sensitive Heat Regulator, and the economical steady burning lamp are some of the things that make **Sure Hatch Incubators** more than merely satisfactory—they never fail to hatch the fertile eggs. **We pay the freight.**

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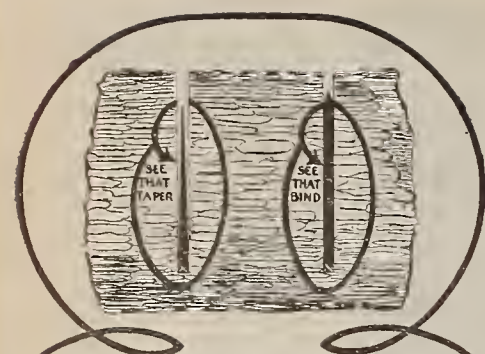
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## Atkins Cross-Cut Saws

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Our best saws have "Silver Steel" marked on the blade. Our cheaper saws are the best value at their price, but are not marked "Silver Steel." Silver Steel is better steel than you'll find in most razors. Before buying, see how the blade is marked.

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Largest Exclusive Saw Manufacturers in the World.

We make all types of Saws—Hand Saws, Cross-Cut, Wood, Rip, Panel, Band, Circular, Flat, Metal, Etc.

## Last Chance for Corn Testing

**B**EFORE the spring rush begins, all of us ought to find the time to test seed-corn. To be sure, we have had good crops grown from untested seed, but could we not have bettered our best yields had we taken the pains to test the seed. While well-tilled and manured land may grow yields of fifty bushels and upward from ordinary seed, none of us can argue that the yield is not increased when the use of tested seed makes those partial and missing hills produce their share.

Like most small tasks the testing of seed-corn is half finished when begun. There are many excellent systems for it, but the following has proven most satisfactory to many, including the writer, who has used it several seasons.

Obtain at the grocery some light wooden boxes, anywhere between sixteen by twenty inches and thirty by thirty-six inches in bottom measurement. Saw them down to a depth of about four inches. Line the bottom and sides with three or four thicknesses of newspaper and fill half full with well-dampened sawdust. Pack the sawdust well, using a small piece of board to make a smooth surface. Cut a piece of muslin a couple of inches longer than the box and twice as wide. One half of the cloth is marked with a soft lead-pencil into two-inch squares and then tacked down tight inside the box over the sawdust. The unmarked half is left as a free flap for a cover. The corn to be tested is placed in rows on shelves or special racks, or on the floor in an extra room.

Each square is used to test an ear. Use six kernels from different parts of the ear. Laying the ears out so that on opening the box there will be no mistaking each ear's representative kernels. To avoid mistakes it is well to mark the first ear of each row by tying a string around it or the tester by sections can be numbered and numbers chalked at the end of each fifth ear or so, on the floor.

When the kernels are in place, lay over the flap of muslin and cover with another piece of cloth—burlap is good—and sprinkle well with water. Fill the box level full with wet sawdust and keep it damp throughout the test. Place the boxes in the most evenly warm place available, where it does not get cold at night. If the boxes are placed near the stove, they should be turned partially around night and morning, that all sides may receive the same amount of heat.

In three to five days, according to the temperature, the kernels of strong vitality will have vigorous sprouts an inch long and roots much longer. In opening the box, take up the burlap carrying the sawdust and lay it aside. Lay back the muslin cover, being careful that none of the kernels stick to the cloth and are carried from their places. In selecting the ears to plant, save no ear that does not produce six strong healthy sprouts.

An ordinary box will test enough seed for three acres, sometimes five. The work can often be done on days too disagreeable to work outside and the boxes will last several seasons if dried and put away when the testing is finished.

And what is the result of this task? When a man has taken that much trouble with his seed he is likely to take corresponding pains with his cultivation, to give that seed every chance to prove its expected excellence. Unconsciously perhaps he gives his ground more careful preparation. The rows of corn are made straighter than usual; the growing corn is more carefully tended; perhaps—is it possible?—the field gets an extra plowing. Husking-time brings the final test, and shows—you can be certain—a record yield for the place. CLIVE F. BROWN.

We described other corn-testing methods in our issue of November 25th, last. FARM AND FIRESIDE has said a great deal on the subject, but it is hard to say too much.

EDITOR.

## Waste Places on the Farm

**D**id you ever stop to think that there is not a single farm in the country but has little nooks and corners of waste land on it that could just as well be yielding their owner an income?

The brushy fence-row is a common form of land waste. It needs but a small amount of energy applied with ax and scythe to turn these idle spots into crop-producing soil; besides adding to the appearance and value of the farm, and prolonging the life of the fence by preventing its decay, brought on through the contact of the brushy foliage.

Sometimes it is impossible to prevent

a stream from cutting off a plot of ground from the main field or pasture-lot, and making it difficult for man or beast to reach it. A well-laid-out grove of walnut, catalpa or other trees might just as well be bringing in a substantial income from the odd corner in the shape of nuts, posts or wood. Often these waste spots are near the house, and make an admirable location for fruit-trees, a strawberry-bed or berry-patch.

Low, marshy land rarely is so boggy that it cannot be drained and made useful. But where this is impracticable, willow switches, stuck into the soft earth, soon transform it into a fine wood-lot. Or, maple and cottonwood trees may be planted for the same purpose, and with excellent results, low lands being especially adapted to the growth of these trees, while their roots tend to retain and build up the soil till the land is raised and a natural drainage formed, when the trees may be cut and the ground tilled.

We consider several feet of land on each side of the old-fashioned hedge fence as waste land. Even though the hedge fence be kept trimmed, it saps the very life from the soil penetrated by its roots, and where the tops and branches are allowed to grow up and shade the ground, the bad effect extends farther on each side of the hedge. If we had a hedge fence-row on a farm, we would not be long about chopping it out and running a modern wire fence in its place.

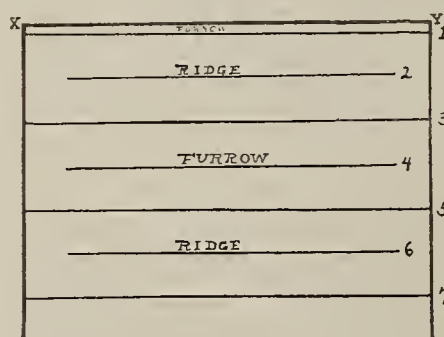
But it remains for the ditch to head the list as a despoiler of farm-lands. Ditches carry away the surface soil—the best on the farm. Not only do they prevent tillage where their channel is cut, but for several feet on each bank the ground must be forfeited as a space for turning the teams. Again, ditches are generally so crooked that they waste many times the amount of land a straight one would. The wise farmer allows no larger ditches than are just sufficient to carry away the rainfall, and that usually requires but very small, shallow ones. Should they begin to wash deeper or wider than necessary, willow stakes may be driven in the channel, where they quickly sprout, take root, and hold all trash and sediment brought down by the water. Old hay, fodder, straw and brush weighted down with useless logs or stones, will soon stop all wash and level the ditch till it may be crossed, when the plow may be used effectively in the filling-up process. As for the crooked ditch, it is very easy to cut a straight channel with a plow (and scraper, if the ditch is deep) across each bend.

Try and figure such work into your schedule for 1910.

M. ALBERTUS COVERDELL.

## Plowing in "Lands"

**A**PENNSYLVANIA man says he does not exactly understand the method of plowing a field in sections or "lands" as it is done here and throughout most of the country. Perhaps I can make it plainer with a diagram. The side of



the field is at the line xy. One starts with the first section, at figure 2 and back-furrows (gathering) until he reaches figures 1 and 3. Then he moves over to 6 and back-furrows (gathering) until he reaches 5 and 7. Then he swings around from 5 to 3 and plows (scattering) the section between those already covered, finishing at 4, where he leaves a furrow.

The following year this is reversed, furrows being left where the ridges are this year. That is, if he desires to keep the land level. If it is wet, and he desires to surface drain it, he repeats instead of reversing.

When he reaches the end of the land he does not stop at all, but the team swings around and keeps going. In plowing around a field one must come to a stop at each turn, and when he comes near the finish he is turning more than half his time, besides trampling down the soil at the corners. FRED GRUNDY.

## Criminal Landlordism

**I**N YOUR issue of November tenth was an article by J. H. Haynes, headed "Owner, Tenant and Soil, All Lose." We deem him altogether right in condemning tenant farming. That over one third of the farms of Indiana are rented is deplorable. The same tenant system and laws are in vogue all over the country.

History informs us that when Rome went down, the empire was owned by some eighteen hundred men, and had forty millions of tenant population. The tenants would not defend their masters; and so Rome went down at the hands of the invaders. At the present less than one per cent own all the houses and lands of England; and ninety-nine per cent are renters; and one fifth of her population are buried in paupers' graves.

An instance of tenantry came under my own eye. I live on a little farm of ten acres, formerly rented. When the place was first rented it was worth four thousand dollars. After being rented for ten years, the heirs were glad to get twenty-five hundred dollars for it. Rent, one thousand dollars. Decrease in value, fifteen hundred dollars. So the owner, the tenant and the land all lost. The purchaser had ideas in his head, and claimed that he could increase the value of the farm five hundred dollars a year for twenty years, and make the place worth more than twelve thousand dollars by planting it in the best kinds of fruit, and taking the best care of it. He has more than made good his hopes thus far.

We rejoice in the reclamation of Ireland from landlordism, but we lose sight of the fact that we ourselves are drifting into landlordism of the worst kind, much worse than exists in England. For we learn to our sorrow that aliens have over seven billion dollars invested in this country. This investment embraces more than twenty-six million acres of land, as much as is embraced in the states of Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut and Delaware. Those acres are rented to American citizens, or held for speculation. On this alien investment American labor pays about three hundred and fifty million dollars annual dividend. And American statesmen have never a word to say against it.

I have studied political economy, social science and finance from every point of the compass, and would ask, is unlimited ownership of houses and lands and rent good, wise, just, right, honest and equitable; or is it the opposite—a man-made institution to gratify human greed and selfishness? Instead of our laws, customs and institutions protecting human rights, and setting bounds and limits to greed, they protect the latter at every point. Should not occupancy and use in limited quantity constitute the right to houses and lands? If a man has the right to buy and own and rent to others at his own rates, ten thousand, one hundred thousand or one million acres of land, he has an unquestioned right to buy, own and rent all of Ohio or Indiana or the whole United States if he can.

Any fool can see the injustice of such a thing. Then why not set limits to human greed and protect human rights. We hold the opinion that unlimited ownership of houses and lands and rent has been the greatest blunder and crime ever committed in this world, and has caused more poverty and misery than all other curses and crimes combined.

J. B. CONSER.

## New Saws and Fresh Filings

Every farm has its own problems.

The farmer not only looks well in his blue-overalls uniform, but he feels well in it.

There is no economy in doing without those things that we can afford to buy—if we really need them.

Let no new day pass without something begun, something done and something planned for days to come.

Some of the most valuable things on a farm are the home-made things devised by the farmer in response to the home-made needs peculiar to his farm.

February is the shortest month

We have in all the year,

But who cares, for the shorter 'tis,

The quicker March is here.

W. J. BURTSCHER.

**APPLETON QUALITY WOOD SAWS**

SAW your own wood and save time, coal and money; or saw your neighbors' wood and

**MAKE \$5 TO \$15 A DAY**

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**PORTABLE WOOD SAWING RIG**

that is unequalled in effective work and profitable operation.

We make the celebrated Hero Friction Feed Drag Saw also, and complete lines of feed grinders, corn shellers, corn huskers, fodder cutters, manure spreaders, horse powers, windmills, etc. Ask for our Free Catalogue.

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Steel Towers to elevate Tanks. Bells, Wind Mills; also Silos, Pumps and Gasoline Engines.

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Cleveland, Ohio  
Dept. 21-B

**FENCE**



# Farm Notes

## What Sorghum Can Stand

For a crop that will come serenely through conditions that would wipe out any other crop, I want to commend sorghum. We have grown sorghum for feed for about seven successive seasons; in this time we have passed through wet seasons, droughts, late and early frosts, and other troubles, but never failed to make a good hay crop, some years exceptionally good.

Last season the harvesting was the most difficult we ever encountered. Having had the very finest prospects, until well up in the season, and an exceptionally heavy growth, what should happen but a heavy wind-storm? It all went flat, not all in the same direction however, and in this condition it ripened. Actually, it was as flat as if a roller had run over it. We knew we were in for a "job" this time for sure, but we had to save it—it was such an immense crop of hay—and we were short of clover-hay, and had a large lot of stock to winter. So, we rolled up our sleeves—as it were—and went at it with a six-foot-cut mower, cutting one way only and that as nearly opposite the way it fell as possible. Three hands were put to opening up the places where the parting-board failed to do its duty. The fact was each swath, or a portion of it, had to be moved over before the mower could pass along again. This was a hard, tedious job, but we got it done, and we had the satisfaction of knowing it was done right.

We let it lie six or seven days before doing anything with it; then the sulky ten-foot rake, a self-dump, was taken in and a portion raked into windrows—only about as much at a time as one man could shock in a day. Labor was scarce, and one man did the entire shocking, of something like three acres, now and then when other work was not too pressing. The consequence was several rains fell on some of it before shocking, and something like three weeks elapsed before the last was put in the shock. Once or twice we thought "this time we've let some spoil," but it didn't. One lot we had raked into windrows took something like four or five rains, and lay there for two weeks. The boys declared it was "rotten," in fact, it looked it; but after a few days of dry weather we hauled it in and fed it, and it was fine. We have concluded sorghum can't spoil under any ordinary conditions, and possibly under extraordinary conditions.

As above stated, we are short of clover-hay and we seldom put up much timothy, hence we commenced on our sorghum in the late fall, hauling it in on a sled as needed, and feeding—feed about—with hay. You would be surprised to see how small a bunch makes a feed for a horse, and more surprised to see how much it will yield per acre, even on poor ground. Then your surprises will be heaped on top of one another when you see how the stock relish it and what "shape" they keep in, how easily a crop is grown and how easily it will keep out in the open all winter in the shock.

The biggest surprise to me is that more people do not grow it, especially those who are always clamoring for hay to feed their half-starved stock. The American farmer is slow to "catch on" to anything new, and when he does "catch on" he hangs to it like grim death, as is evidenced by some of the back-date methods he is clinging to today.

OMER R. ABRAHAM.

Sorghum endures drought when it is growing, and bad weather at harvesting-time, without material damage. A writer in a recent Southern paper describes feeding it after it had been frosted, without evil effects. When fed green, the first few feeds should be given cautiously, as it has a tendency to produce bloat, but it is not nearly so risky in that direction as many of our other standard feeds. Instances of injury or death of sorghum-fed cattle seem confined to animals on second-growth sorghum, which stockmen pretty generally avoid.

Sorghum-hay fed, feed about, with clover-hay gives a very fairly balanced ration. Sorghum, also, is first class as silage. Its main dominion is the drier West, but it is worth attention elsewhere.

## Cow-Pea Experience

The complaint was general here in West Virginia that the cow-pea crop last year was a crop of vines rather than peas. The growing season was very wet and cool. Our peas were sown early in June on a soil which had been turned

during the winter and harrowed just before sowing. We sowed the Iron pea and the vines were green and thrifty until frost came; but very few blossoms appeared and they were late. If this had been our first experience with this variety we would have decided at once that they were too late a maturing variety for this locality; but we have seen the Iron pea mature here long before frost and we attribute this failure to maturity to the season. The Iron pea holds its foliage better than any other variety that we have ever tried.

We planted a few New Era cow-peas in the corn hills May 29th. These matured seed in August. We also planted a few Iron cow-peas May 31st in the corn hills; few pods matured by the last of September. Our experience with the large black cow-pea is that by the time the peas are ripe, the leaves have all turned yellow and dropped off. The Whippoorwill pea does very well some years, and at other times the pods become diseased and fail to fill well.

A. J. LEGG.

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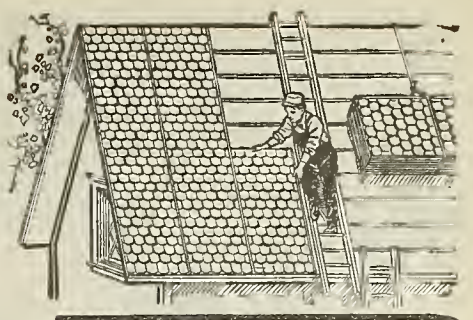
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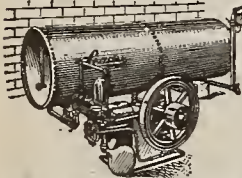
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# Practical Farm Notes

## Blindman's-Buff Marketing

**M**ARKETING should be conducted with just as much system as growing. Sometimes, by the proper system, inferior produce can be placed on the market that will sell very well. Do not, however, infer by this that I advise the custom of placing inferior produce on the market; but I have seen times when the market was empty and would use some really inferior produce at fair prices. But to do this or any other marketing successfully we have got to study and thoroughly know the condition of the market.

To illustrate my point I will give a little incident I recently chanced to observe. I was away from home and had gone down early to take the return train. When I got to the depot I noticed a car side-tracked near-by, with four or five wagons beside it and a crowd of men standing there.

As usual I thought I might learn something by listening to them and I must say that I did.

These men had hauled and filled a car with sweet potatoes for shipment to "the market," as they said. I asked what market they were shipping to and they said they had not yet decided. They named over six or seven points they were thinking of. One named a certain market, which he thought good, and another man said, "my potatoes will not go there, for he skinned me out of the last shipment I made him, and I am done with him." I listened to their conversation some few minutes and finally asked what they could get for them at the different markets they were thinking of shipping to.

Not one of them knew what potatoes were quoted at. They had never got any prices, but just thought they would try a shipment anyway. Just try a shipment anyway! How did they know their produce would bring enough to pay its own freight? Then I asked them if they did not have house room enough for them to hold them until they knew what they were doing. They all said they had good houses and could have kept them longer, but just thought they would ship out some and try it.

One of the men in the crowd, who showed he was about the worst posted along such lines, had the greater part of the potatoes in the car—about two thirds of the car; and they all decided to ship just where he wanted to. Well, well, well. Just ship where he wanted to, when he did not know one thing about the market. He had worked hard all last summer to raise those potatoes, and they were good ones, too, and here he was sending them off, not knowing who he was shipping to, nor knowing where the best prices were, or whether they were

selling at all or not. I raise sweet potatoes myself, and I know sometimes they do not sell at all.

I really do not know where they did finally decide to ship to, and it is no wonder to me that such men are complaining of not making money on their produce.

These men lacked one big essential for farming success. I asked the station agent if they always did this way and he said that they did, and he also said that they never got anything much out of their crops. Sometimes a little and sometimes scarcely enough to pay expenses. Now this is not good business. These men claimed that a certain commission house would steal; well, there are men in the commission business that are out for all there is to it, and there are also commission men that are just as honest as any farmer and will deal straight. I have never had much trouble with the commission business, and usually get good prices. And I surely think that there is as much need for system in marketing as there is for more honest commission men.

R. B. RUSHING.

## The Runt

**I**N THE litter shown there were seventeen pigs, sixteen of them good sized and well shaped, and one a runt—the lit-



The Runt—A Common Mistake

All the Runts Are Not in the Pig-Pens. There Should Be no Place for Them on the Farm

tle fellow to the left in the picture. Six of the best pigs were overlaid by the sow, before they were two days old. The runt escaped; it should have been killed on first sight.

This is a common mistake made by most farmers. They grow too many runts; not only in their pig-pens, but in

their corn-fields, their poultry-yards, their orchards. These runts consume as much as a well-developed, thrifty animal, the same being almost a total loss, for a runt is a runt and you cannot make him anything else. In the corn-field the stalks that bear no ears are the very worst kind of runts; they consume as much fertility as the stalks that produce two good ears. Breed out the runts in the pens, by selecting a better sire and by providing better quarters for the stock; in the field, by a better grade of seed and by a more thorough method of culture. "A bad beginning means a good ending" is an adage that does not hold for growing things. Start with the best you can get.

J. W. GRIFFIN.

## Orchard Defense

**I**N THE Year-Book of the United States Department of Agriculture for 1907, G. Harold Hume outlined the following in regard to frost protection in California, which, however, is of very general application:

"There are few districts in the citrus belt of California that may not be visited by frost in December, January or February. The prevention of injury is influenced largely by the location of groves on the higher lands from which cold air drains. Many of the groves on the lower lands use wicker coal-baskets, briquets of

shavings, crude oil and asphaltum, or sheet-iron stoves in which the same material is burned. Oil smudges located at definite intervals between the trees are sometimes burned.

"These materials are used to cause a circulation of air over the grove to mix together the strata of different temperatures, or to produce a cloud of smoke over the grove in the morning in order to exclude the direct sunlight and thereby prevent the rapid thawing of the fruit when it has been frozen during the preceding night. It is rapid thawing, rather than the freezing that causes most of the injury to citrus fruits that have been subjected to ordinary frost temperatures.

"It is a common practice, also, to run the water in the irrigation furrows between the trees during the cold nights in order to make use of the latent heat of the water as a means of frost protection. That is, the water has to be cooled to freezing before the surroundings can freeze.

"The following system of frost fighting was observed in a grove on a cold night: There were twenty-five perforated sheet-iron stoves scattered over each acre of grove, one stove being placed in the center of the square between four trees. These stoves were filled with a prepared mixture of shavings, asphaltum and crude oil. A small quantity of oil was poured over the smudging material and quickly lighted. One man to about five acres kept the fires in good burning condition after they were once lit.

"Just how much benefit is derived from these various devices is difficult to estimate. One grower writes:

"We have been able to protect against the severest cold we have had since we secured the coal-baskets. Several times the temperature has been around twenty-four or twenty-five degrees, but we were usually able to make a change of from three to five degrees when our baskets were lighted and were giving off a good heat.

"Aside from the injury to the fruit and the young wood by frost, continued cold weather causes the wood of the lemon-trees to mature and the fruit to develop a coarse, rough texture, and to ripen prematurely."

## One Pail, or Two?

Why not make the cows pay better this year than last. You can do it; you can get better returns at the pail and the churn than you've known before in all your dairy experience. Give Dr. Hess Stock Food to the cows twice a day in their grain. No need to increase grain or fodder—it's simply a matter of making the grain and fodder you do give digest more perfectly, and of turning a larger per cent of it into rich, foamy milk.

## DR. HESS STOCK FOOD

will do this—is doing it wherever given, because it makes grain, hay, roughage—whatever the cow eats—at once available to pass into the blood as the basis of a larger milk secretion. This attention to animal digestion, rather than to quantity of ration, is known among stock raisers as "THE DR. HESS IDEA" and is practical for all farm animals. Horses work better, steers fat quicker, and sheep and hogs show greatest development when they receive Dr. Hess Stock Food Daily. Fed twice a day in small doses. Sold on a written guarantee.

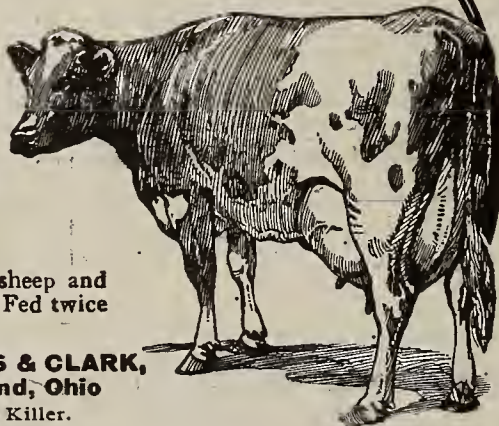
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## INSTANT LOUSE KILLER KILLS LICE



## With the Editor

Two things the editor of this paper would wish without a moment's hesitation if some witch or fairy would grant him three wishes. First he would wish that all the people who make FARM AND FIRESIDE could spend a generous part of every year in actual work on farms. And his second wish would be that every subscriber to FARM AND FIRESIDE could spend half a day of every month getting acquainted with the force of active, hustling, planning, thinking, managing people who are trying to make this THE NATIONAL FARM PAPER, better and better every issue.

It would be good for the FARM AND FIRESIDE force to sit about the fire in the winter, or under the trees in front of the house in summer, and take part in the ordinary farm talk. Often they would find themselves scratching gravel mentally to keep up with the sweep of the thought. The thoughtful farmer is and ought to be a deep thinker—a deeper and better thinker than the merchant or the lawyer or the banker. If he isn't, it's his own fault. As he follows the plow—or rides it—he can hear the low talk of the share as it cuts root after root, he can see the rich loam roll down in a brown wave of fertility as the mold-board walks through the earth, he can govern his well-trained horses, and at the same time he can think. The merchant, the banker or the manufacturer is so wrapped up in his business while he is at it that he can only think he is thinking.

So I would wish more people might work on farms a while each year. I'd like them to know how it is to pick up potatoes, or husk "down" corn until their backs break in two. I'd like to have them know what it is to husk corn with cracks in their hands. And I'd like to have them tussle with calves learning to drink, and with colts and calves that refuse to stand up and take their meals, and as to our women, with turkey-gobblers that seem possessed to kill the last one of every litter of chickens that is brought off, and with curculio, vine-leaf hoppers, plant-lice, mites, brown-tail moth, chinch-bugs, boll-weevil, poll-evil, Hessian fly, squash-bugs, roun, pip, bots, glands and all the other pests, real and imaginary, that farms are heir to. At the same time I'd like them to know the joys of pure air, pure food, open fields, green grass, flowers, trees, prairie, being their own bosses, and general human freedom.

Lots of our own staff know all these things from experience—but I'd like to have them renew their acquaintance with the soil every year. That is my first wish. It would be of vast benefit to the paper.

And then, it would help us with our readers and assist to a better mutual understanding if all of you could meet all of us face to face once in a while. The paper would then be a real living thing, representing real living people—people whose hands you have clasped.

Then you would understand better than you do now the way in which the huge presses work day and night to print the papers, how the folders with their steel fingers select the pages from piles and run them all to their proper places, and how the stitcher binds them if they are folded so as to be perfect copies, and refuses to move if they are imperfect—these things would make the children's eyes bulge out.

You would understand that this industry of ours is—and will continue to be if our good President and our good Speaker and our good Senate will let us—one of the greatest manufacturing industries of the country.

It is putting intelligence up in packages for the people.

I wish you could hear the girls and women who design the patterns and plan "The Household" for the paper as they consult as to how they may best serve the women of the great FARM AND FIRESIDE family. You may think that it's a matter of dollars and cents with them; but it isn't. I have seen "Cousin Sally's" eyes fill with tears at the story of trouble and hardship in some woman's letter, or at the innocence and faith in some little girl's or boy's scrawled message. It's not a matter of dollars and cents. It's a matter of dealing with human souls and human desires and human needs. And if you could sit down and talk with "Cousin Sally," or have her come into your sitting-room and talk with you, you would realize that it's no more a matter of dollars and cents with her than it is with the minister when he comes to pray at your bedside. It's in another field, that's all; but it's the same thing—the desire to serve. And she could serve you better, and you could come to her more freely if you knew each other.

So those would be my first two out of three wishes. As for the third, I think I should like to have you and the advertisers come together. Of course the advertiser's relations with you are purely commercial. But commerce is service. Did you ever think of that? The greatest thing in civilization is freedom of men to serve each other by exchanging products. You have more farm stuff than you can use. Commerce enables you to exchange it for everything else through the medium of money. The world is a great market-place—and the more complete a market-place it is, the more honest, the better managed, the better world it is.

The advertising columns of FARM AND FIRESIDE are a big market-place throbbing with interest. If you knew the advertisers better, you would make it more and more your market-place—and in doing so you would show a twofold wisdom. Why? Because (1) you are safeguarded by FARM AND FIRESIDE's indorsement and guarantee, and (2) you are patronizing those who make it possible for us to give you so good a paper for so small a price.

"You scratch my back, and I'll scratch yours," is sometimes a poor rule. It leads to mighty bad things in politics, for instance. But in this matter of your relations with FARM AND FIRESIDE, it's the golden rule of mutual relations. If we scratch your back with a better paper from month to month, you surely can serve your own interests no better than to scratch ours by mentioning us to these advertisers when you write to them—mentioning us so often that they will recognize FARM AND FIRESIDE as a good place to display their advertising and so go on making us more and more able to give you improvements.

I had a lot of new features to write about—splendid things—which we're going to have soon. Eugene Wood is sending us some of the best things he ever wrote. Marshall O. Leighton, Chief Hydrographer of the United States, is preparing a series on power on the farm—water-power, gasoline and steam—and he's a world-wide authority. Professor King's articles are better than we dared hope, and Mr. Buffum's horse articles are the very best that can be got on his specialty. Don't miss any of these. And our old stand-bys are catching step with the march of improvement and outdoing themselves in the excellence of their practical farm talk. We think the next year is to be far the best we ever had.

*Robert S. Smith*



## Make Big Money Training Horses!

Send for Handsome Book FREE



### Anyone Can Learn by Prof. Beery's Simple Methods

Prof. Beery, King of Horse Tamers and Trainers, has retired from the Arena and will teach his wonderful system to a limited number, by mail.

Prof. Jesse Beery is acknowledged to be the world's master horseman. His exhibitions of taming man-killing horses, and conquering horses of all dispositions have thrilled vast audiences everywhere. He can teach you the same simple principles which have brought him such marvelous success, so that you can take the most vicious horse and subdue him in a few minutes—you can train a green colt, break any horse of bad habits, teach a horse to drive without reins, tell the disposition of a horse at a glance, train him to do tricks, and in fact gain complete mastery over any horse, young or old.

You can take a worthless, dangerous animal and double his value by these easy, plain methods. Think of the money in this feature alone! Your neighbors will sell you horses at a low price that they would be glad to buy back at double the figure after you have trained them for a day or two. And those horses will be cured of shying, kicking, balking, biting and all other bad traits forever.

There is no "personal magnetism" nor fake in this. Prof. Beery's lessons are plain, thorough and practical. He will refund your money if you are not satisfied that he does just what he claims.

### \$1,200 to \$3,000 a Year At Home or Traveling

Competent Horse Trainers are in demand everywhere. People gladly pay \$15 to \$25 a head to have horses tamed, trained, cured of habits, to have colts broken to harness. A good trainer can always keep his stable full of horses.

### What Some of Prof. Beery's Students Are Doing

Emmet White of Wellman, Iowa, writes: "I would not take \$500 for what you have taught me. You may judge of my success when I tell you that I have been able to buy a home and an automobile solely through earnings from training horses as taught by your excellent methods. I am proud of my profession."

F. N. Goux, Vernon, N. Y. writes: "I cannot speak in high enough praise of your instruction. I am at present handling a \$1,000 horse. People bring me horses to train from miles around."

Wm. N. Kelley, Hillsboro, Wis., says: "I am making lots of money here at home, and your course has made me so successful I am planning to go on the road training horses and giving exhibitions."

Roy Fordyce, 04124 Adams St., Spokane, Wash., writes: "I am delighted with your lessons. Have trained a three-year-old stallion to drive without a bridle or lines. I would recommend your course unqualifiedly to anyone."

A. W. Bower, Tiffin, Ind., writes: "You have made me a practical colt-trainer. Have all I can do and making more money than ever before."

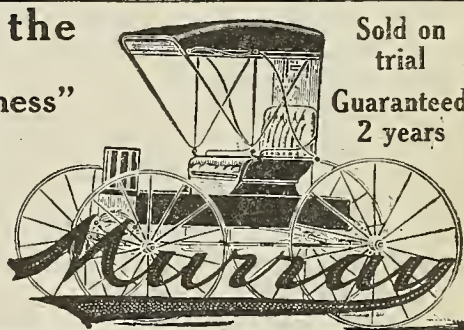
[7] Prof. Jesse Beery  
Dept. 22 Pleasant Hill, Ohio

### Don't buy till you see the Murray "Style Book of Vehicles—Harness"

Then you will know which is best—and costs least. Murray invites comparison of all catalogs. We are the oldest big designers in the country. We have the best equipment, use only the finest materials, employ only the most careful workmen, produce large quantities, and sell direct to the consumer. Consequently we can undersell others quality for quality.

Save money, get the most for your money, send for the largest, finest and most complete catalog of vehicles and harness ever issued. Our complete line is fully described and illustrated and is a mine of valuable information for vehicle or harness buyers. We pay the postage. FREE to you.

THE WILBER H. MURRAY MFG. CO., 322-328 E. 5th St., Cincinnati, Ohio



### No Danger From Fire When You Build With Concrete

A fire can wipe out in an hour what it may have taken a life-time to build.

Did you ever drop a lighted lantern in the barn or the wagon shed? You know how quickly the flames begin to dance about the floor and reach the wall. Every farmer has had this experience, and many have been sorry over the consequences.

You will never worry about fires if your barn or shed is built of concrete made with

### ATLAS Portland Cement Makes The Best CONCRETE

ATLAS is the best cement manufactured. It is made of genuine Portland Cement Rock. It contains no furnace slag.

ATLAS has the greatest sale because of its uniform quality and absolute purity. There is only one quality of ATLAS manufactured—the best that can be made and the same for everybody.

The United States Government ordered 4,500,000 barrels of ATLAS for the Panama Canal. You get the same quality as the Government if you order only one bag.

### Our Free Cement Book

"Concrete Construction About the Home and on the Farm" illustrates hundreds of different ways of using concrete. It will show you how to make and place the concrete mixture in the best and most economical way. It gives complete instructions and illustrates them with photographs, diagrams and plans. Send for the book now.

Ask your dealer for ATLAS. If he cannot supply you, write to

The ATLAS Portland CEMENT Co.  
Dept. 122 30 Broad St. New York

Daily Productive capacity over 50,000 barrels—the largest in the world





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One Year (24 numbers) . . . . 50 cents  
Canadian Subscriptions . 1 Year, 75 cents

Entered at the Post-Office at Springfield,  
Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.



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## ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. \$2.00 per agate line for both editions; \$1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/4 inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

## A Canadian View of It

READERS of Mr. Streeter's articles on the marketing of farm products in this paper must feel anew the importance of the subject. We shall present more of these from time to time, and the forthcoming papers will deal strongly and instructively with the manner in which the farmers' interests are subserved and sacrificed in the great grain markets of the country. This is perhaps the most important matter in dollars and cents before us as farmers. The gospel of stock-raising has never been anywhere so universally accepted as to supersede the growing of grain for sale. In fact, in the great stock-raising state of Illinois it is said on good authority that three fourths of the farmers are still grain farmers. And the tendency now seems to be away from stock-raising and toward grain farming again. Such being the case, the subject of the marketing of grain is not by any means waning in significance.

Canada—and especially western Canada—is in the same boat with us, though the Canadian inspection system is apparently vastly better than ours. A Canadian proposition for governmental control of the grain business is, therefore, interesting. A committee has been appointed by the Manitoba Grain-Growers' Association (Let's see, have you a state grain growers' association?) to coöperate with the government at Winnipeg in drawing up a plan for the government ownership of interior elevators. A memorandum of its recommendations was presented January 5th. It is proposed that the existing elevators be purchased by the province, or that a new system be built if the present owners refuse to sell. The elevators are then to be run at cost. It is estimated that under such a system wheat can be taken in, stored and cleaned for one and three fourths cents a bushel, oats for one cent, barley for one and a half cents and flax for two cents. Inasmuch as Manitoba is a grain-growers' country, we need not be surprised to see this scheme carried through if the farmers really desire it. The elevator men of this country should at once enter upon the work of reforming their business so as to remove from the American people the temptation to follow the Canadian example.

\* \* \*

A frown is a smile gone wrong.

Every farm is a link in the great agricultural chain. Make yours a strong link.

Some people think that keeping up appearances is more important than keeping down expenses.

You want your hired man to be fairly intelligent, but not to keep too well posted as to the time of day.

## Taft on Conservation

THE recommendations of President Taft on the very important matters of the conservation of water-power sites, coal-lands and other precious things still in the public domain have met with the approval of every citizen unselfishly interested in the matter. Mr. Taft has placed the responsibility where it belongs—on Congress. The nation now looks to Congress to carry out his suggestions. On waterways, the President favors nine feet in the Mississippi and Ohio, and six on the upper Mississippi, and he follows rather closely the ideas of the army engineers. He takes the position that river improvement should not be undertaken until something like certainty exists that commerce will follow the dredge. That position will have to be abandoned. Nobody can ever prove that commerce will go anywhere, but when trade leaves a great river like the Missouri, the Mississippi or the Ohio some reason exists outside the perversity of shippers. President Taft apparently fails to see that the railways must be prevented from unfair competition with waterways if they are to flourish, just as they have been prevented by law in Germany. When this is done, and free wharves and docks are provided, commerce will seek the rivers as of yore. Aside from this excusable error the message is most excellent.

He who serves, sacrifices.

Few people follow their own advice.

A smile is the poetry of motion on the face.

The aimless man doesn't hit much of a high mark.

You can't get on in the world by "getting on your ear."

The man behind the plowshare is sure to get his share.

The farm has been the training-school for the nation's great men.

The scientific farmer has good ground for expecting a large crop.

Mr. J. F. Batts, whose corn-growing feat we described in a recent issue, is putting aside twenty acres for 1910 on which he will attempt the greatest corn-growing test on record.

## Investigate the Postal Deficit—Then Act

PRESIDENT TAFT's recommendation that the publishers first and the readers afterward of periodicals like FARM AND FIRESIDE be made to make up the postal deficit will bear good fruit if it leads to a complete investigation of the subject. And no just man in Congress will vote for the change without a searching investigation. An investigation may show that the rates for carrying magazines are profitable under proper contracts. It should explain why express can be carried on the same trains and in some cases in the same cars for a quarter of the rate the government pays for carrying the mails. It ought to make plain how much the franking privilege of government officers has to do with the deficit. It should show whether the contracts for carrying the mails are now under the same auspices which, until recently, weighed the mails seven days for a week and divided the result by six to get the average weight carried per day—thus making the government pay for sixteen and two thirds per cent more pounds than it carried. It would, of course, explain why we pay more yearly as rental for mail-cars than it costs to build the cars. It will, if made thoroughly, look into the allegation that senators and congressmen with railway leanings are in the habit of franking huge loads of government publications through the mails while the weighing is being done, thus adding to, if not actually creating, the deficit.

And after all these and many other things are looked into, including the profits which might be made by postal savings banks and parcels posts, if it is found that the magazine business contributes to the deficit—which we deny—why, we shall all be willing to have the rates changed. On a basis of justice to all parties—railways, magazines, readers and government—of course. And is anything less than this a real "square deal?"

\* \* \*

Make the rainy days your brainy days—when you feed your intellectual self.

Perhaps the following is the largest price obtained for a single turkey gobbler in 1909. It weighed, dressed, twenty-seven and three fourths pounds, and brought six dollars and eighty-five cents. The gobbler was two years old.

Hookworm victims used to be considered lazy and incurable. They are now known to be sick and curable. It is hard to understand why sensible men should protest against this good news, or why a sensible governor should refuse to appoint delegates to a hookworm congress.

If your neighborhood is unprogressive, don't stand and jaw about it; just show them the shape of your back, and march on ahead. Somebody is sure to leave the crowd and follow close enough behind you to at least be within speaking distance, anyway, so that you need not be altogether lonesome.

## Some Consumers' Dollars

THE packing concern of Swift & Company is supposed to be greatly overcapitalized. Its capital stock is \$60,000,000. It carried last year a surplus of \$22,000,000, mostly undistributed profits. This year, after paying dividends to the amount of seven per cent on its stock, it carried over into surplus from the year's profits the sum of \$4,000,000. This indicates net returns on all the company's stock of 13.66 per cent. This showing, taken with those of Armour and the other packers whose statements have been published, indicate that the local butchers' combines are not the only traps for the catching of the consumers' dollars on their way to the stock-raisers.

\* \* \*

It must be a dull farmer who is content to work with dull tools.

The weeds that spring after the last hoeing are the ones that seed the field.

It pays well to cultivate the crops in your fields, but it pays far better to cultivate the boys and girls in your home.

A woman in Kentucky sold in three years from a Duroc sow five hundred dollars worth of pigs. She took six of them to a county fair, and they won in premiums thirty-five dollars.

## OUT OF THE LETTER-BOX

No one could have a doubt about the way our readers feel on the issue of the second-class postage rate. Their letters are coming in so fast that it is all we can do to acknowledge them. We can print only a few, and those only in part, but the letters here quoted express very truly the sentiments of all. So far, we have heard from only one man that liked the postmaster-general's scheme.

We know there are evils, the correction of which, and the adoption of business principles, would do away with postal deficits and leave a nice little balance. If, in a private business, the manager reports that affairs are running down, down, down, the directors call a meeting and off goes his head. I wonder if it isn't time for us to call a meeting?

Iowa.

F. A. NEUMAN.

I am tired of writing to our congressmen. It's like pouring water on a goose, they are so smooth. I pounded away a number of years against this free-seed nuisance, telling them I felt it a personal insult to be sent these seeds—as if those trashy seeds, not worth the postage on them, would influence me to vote better for them. They send a smooth reply to your letter, and that ends it.

Maine.

V. T. LUNDVALL.

Mr. Welliver did not go far enough. He ought to have added to the causes of the deficit the franking privilege of government officers. The free garden-seeds are an awful graft on the government. The seeds put out never do the farmers any good, as most of them are old seeds and won't grow, anyway. Last spring we put out early sweet corn our congressman sent, and did not get but a stalk or two. If the government would stop that, and franking, and the other leaks, and add parcels post, the deficit would be knocked higher than Gilroy's kite.

Indiana.

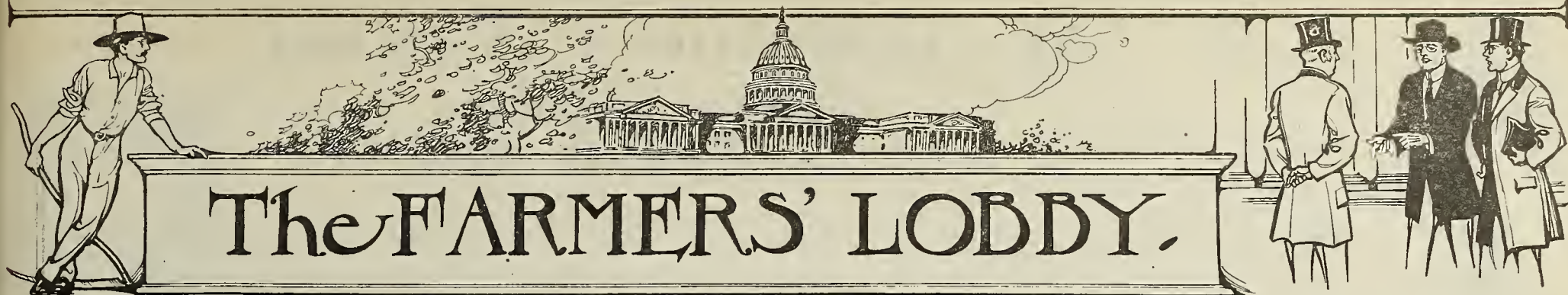
F. M. LANGSTON.

It appears to me that the President is straining at a gnat and swallowing a camel. In his message he said: "The figures are startling and show the payment of an enormous subsidy to the newspapers, magazines and periodicals." Then in a clause closely following he said: "I earnestly recommend to Congress the consideration and passage of a ship subsidy bill." The President thinks it startling for a subsidy to be paid to newspapers and magazines, thereby giving cheaper reading to rural homes; but not at all startling to give a subsidy to rich ship-building corporations.

Ohio.

F. M. MILLER.





By Judson C. Welliver

Moral Suasion by Mail . . . "The People Will  
Take Care of the Insurgents" . . . The Old  
Order Changes . . . Party Lines Proving Chalk  
Lines . . . A New Party? . . . Cost of Living  
and Campaign Talk . . . Insurgents Hunting Jokers  
in the Administration's Measures . . . Ferment

**Y**OUR Uncle Samuel is in danger of being swamped by the correspondence his enthusiastic nephews and nieces, sisters and cousins and aunts are pouring in on him. Everybody seems suddenly bent on writing a letter to his congressman or his senators, presenting some views, advice and counsel. • Nothing like it was ever seen before. It is the real, big, overwhelming phenomenon of the present strange political juncture.

The matter can be illustrated by the case of one member of the House. Representative George W. Norris of Nebraska represents a prairie district. It includes an area as big as any state in New England, inhabited by people who in a few years have turned a slice of what was once booked as the "Great American Desert" into a wonderfully prosperous farming and stock-raising region. Ordinarily, these people have been too busy to write many letters to their congressman. A few days ago Mr. Norris, who is a very rank and persistent insurgent against the rule of Speaker Cannon, took the floor and carried an amendment which the whole power of the House organization opposed. Four days after that fight, Mr. Norris' desk was submerged in letters from the country. In one space of twenty-four hours he received one hundred and three of them. Just one hundred and two of those letters presented congratulations and good wishes and urgings to keep up the fight. The one hundred and third was a letter from an old personal friend who feared that persistent insurgency was about to ruin a promising political career.

Those one hundred and three letters came from all over the Union. They were from strangers to Mr. Norris, whose letters were written with the sole purpose of approving his anti-Cannon course. Many of them contained references to the report that the national administration had adopted a policy of giving no patronage to the insurgent Republicans; and the summary of this comment may be put in the admonition, "Don't worry about the patronage; the people will take care of the insurgents."

This case is a typical one. Regulars in Congress have been getting letters advising them to be less regular if they want to keep their seats. Insurgents all along the line have been receiving encouragement and comfort. The action of President Taft in removing Gifford Pinchot from the forest service was responsible for a great number of letters. The action of the Republican congressional campaign committee, in undertaking formally to drive the insurgents out of the Republican party, inspired another large share of the deluge of comments, almost uniformly by way of denouncing the committee and its action.

Nobody could read a few scores of the letters, as I have done, and not realize that the Taft administration is being subjected to all the acid tests that an inquisitive and animated public opinion knows how to apply. It would be dishonest and senseless to attempt concealment of the fact that President Taft's leadership of his party and his conduct of the campaign for the Roosevelt policies that were entrusted to his charge by the country, have failed to command the unquestioning confidence of the progressive elements among the people. The President is still on trial. No verdict has been brought in from the jury of public sentiment. There is a most considerate disposition to give him plenty of time, to reach no hasty conclusions. But the feeling is that the evidence which is coming in, is unfavorable to the administration's case.

\* \* \*

**T**HERE are only a few men still living, who were delegates to the Chicago convention of 1860 which made Abraham Lincoln the Republican nominee for President of the United States. But a few days ago it was my pleasure and profit to talk with one of these, a fine old statesman who has been in public service most of his long life. He turned back a half-century, looking for a parallel which would aid in illuminating and explaining conditions of to-day and in his recollections of those years of turbulence out of which the Republican party was born as successor of the old Whig party, he found the parallel to conditions of to-day! He told of the popular ferment, the frequent expression that "one party was no better than the other," the constant effort to bring together "people who thought together." He pointed out that there were pro-slavery Whigs and anti-slavery Whigs, pro-slavery Democrats

and anti-slavery Democrats. With their traditions, their affiliations, their long-time devotion to political expediency, their records of backing and filling and dodging, their organizations in the hands of men who played too much at politics and too little at statesmanship, both the old parties had got themselves into such situation that they could not be made into effective instrumentalities to deal with the crisis that thoughtful men saw was surely impending.

And so came the Republican party. The parallel with present-day conditions was certainly interesting: The Democrats divided into radical and conservative wings, the Republicans split into regular and insurgent factions; neither party able to present a square, united front on the big questions of the time; and an increasing number of people predicting a new party.

Insurgent Republicans charge freely that the regulars are plotting party defeat, and there is every reason to believe that the regulars actually are planning to compass the defeat of some of the insurgents, even if at the risk of giving control of the House to the Democrats. The insurgents are quite willing that the next Congress should be Democratic, if the alternative must be control by the Cannon forces. Many Democrats, on the other hand, realizing the difficulty of their party accomplishing results with a Republican President and Senate, would be secretly pleased to see the regular Republicans win the victory this year—and the responsibility that goes with it.

And the letters which come from the country, these same letters to which I have referred as coming in record-making numbers, suggest that the same general ideas are in the minds of the people, and that more thinking is going on than in many years before. Hard-headed men who pride themselves on never being swept off their feet will tell you that it will all blow over; that the country is going to be prosperous, that prosperity will vindicate the new tariff law, sustain the party in power and end whatever of unrest there is in the public mind. Perhaps it will.

\* \* \*

**T**HERE is a rude attempt to analyze the condition of the public mind at present. It may be incomplete and unsatisfactory, but it is as honest as I am able to make it. Congress is not quite certain whether anything can be done about it. There is recognition of the fact that people are concerned about the increasing cost of living. Senator Elkins has introduced a resolution for a sweeping investigation of the whole matter. The senator thinks we are living too fast, going in for too much of luxury and indulgence.

The Democrats are going to make great capital out of this matter of cost of living, the coming summer and autumn, charging that a Republican tariff is responsible. Well, I have learned the answer the Republicans will make, in their literature and from the stump. They will analyze the rise in prices, and demonstrate that the things which have become more expensive since the tariff bill passed are those on which the tariff was lowered and those whose prices have fallen are the ones on which the tariff was raised. For instance: The tariff on hides was lowered in the expectation that it might affect the price of shoes and leather. Instead, they have been going higher ever since the bill passed. Iron and steel duties were reduced, and the changes in iron and steel prices have been upward. There were many reductions in duties on agricultural products—and on these prices have advanced.

In almost every specific case the argument is more or less unfair and unjust, though it is going to be presented just as effectively as possible, and without doubt will have a good deal of effect. There are many exceptions to this rule, and many causes other than the tariff that account for the increases in price. Take cotton goods. The tariff was actually raised, and the prices have gone up. On woollen goods the tariff was

left alone—and again the prices have gone up. No apparent relation to the tariff there. As to the increases in prices of meats and bread-stuffs, almost everybody has come in recent years to recognize that the tariff has no effect, anyhow, on articles of which we have a vast surplus for export.

\* \* \*

**B**Y THE time this letter is in print, it is very possible that the Supreme Court may have decided the tobacco and perhaps the Standard Oil cases, in which the government demands dissolution of those trusts under the Sherman anti-trust law. The circuit court in each case decreed their dissolution. The general expectation is that the Supreme Court will sustain these decrees.

Just as soon as these big trust cases are decided, the real contest over a national incorporation act will begin. President Taft has recommended such legislation, and his advisers have drawn a bill. This bill and the Elkins bill amending the Interstate Commerce Act, are put forth as the two distinguishing measures representative of the constructive program of the administration this session. They are to be pressed for passage as a test of party loyalty. Whoever undertakes to attack or amend them will be set down as an enemy unworthy of administration favor and support.

Nevertheless, the same group of Republican senators who led the fight on the tariff bill—LaFollette, Beveridge, Cummins, Dolliver, Bristow, Clapp, Nelson—together with Borah, Brown and probably several others, are determined that those laws shall not pass without radical amendment. They allege that the measures are wolves of reaction in the sheep's clothing of progressiveness. They charge that the railroad bill will authorize rate agreements among the railroads without proper supervision by the Interstate Commerce Commission; that it will legalize all outstanding issues of stocks and bonds and make them the evidence of the value of the properties, on which they will be entitled to earn returns. They charge that the supposed increase of the power of the Interstate Commerce Commission is a pretense, and that the grant of authority to the commission to suspend the taking effect of a rate for sixty days is worthless because the commission cannot possibly make an investigation and order within sixty days. In short, they will charge that this bill pretends to represent the interest of the shipping and consuming public, but really represents the interest of railroad capital.

Concerning the federal incorporation bill, it will be declared that the act is no more or less than a scheme to permit the tobacco and oil trusts, if they are ordered dissolved by the Supreme Court, to reincorporate under the new federal act, hold their properties together, retain their present managements, and continue their domination and monopoly. But this is not all. They will charge that the entire aggregation of trusts now in existence would be able to secure immunity from prosecution under the Sherman act, by reorganizing under the new federal incorporation act. They believe that the great telephone and telegraph merger is to be formed under the federal act, if it once passes, and that the billion-dollar copper merger would be among the first concerns to be taken under the new law.

That latter combination was about to be completed, when the Standard Oil decision was handed down by the circuit court of appeals in the eighth circuit. Thereupon the copper people, recognizing the decision would apply as well to copper, halted; and Daniel Guggenheim, head of the proposed combination, has come out in favor of federal incorporation and regulation for trusts!

Which will be construed to mean that the copper interests want the federal incorporation act to enable them to carry out their merger plans in security and immunity.

"We will make these measures just as odious as possible by analyzing them and telling the truth about them so that the whole country will understand the truth," emphatically declared one Republican who is opposed to them first and last.

From all of which it may be observed that the legislative program of the winter is in most uncertain condition, and that there is more political chaos in Washington than could be described in detail in a good many articles of the compass of this one.



# St. Valentine's Partner

By Izola Forrester

Illustrations by R. G. Vosburgh



"He certainly looked comical"

HE CERTAINLY looked comical, even for St. Valentine's Day, in New York. Down at the A. D. T. office, amongst half a dozen or more messenger-boys, he was the smallest and homeliest, but never had he looked so little and determined as when he climbed the steps of the tall studio building facing Washington Square, a baby on one arm, and a huge bunch of red roses on the other.

"Miss Genevieve Hilbert," it said on the card he had been given to deliver, and beneath the name and address, "Compliments of the day."

"Gee," thought "Peanuts" as they called him at the office. "It's a good thing he ain't wishing her many returns of de day."

He stared down at the baby after he had rung the bell. It was a decent, well-behaved baby, about ten months old. "Peanuts" did not know the sex. There had been a lot of people at the desk when his number had been called, and he had not seen the person giving the order. He had been half asleep on the bench, after a hard call way over to Flatbush. Washington Square was easy after Flatbush, and the baby had dozed off to sleep as he walked down Fifth Avenue with it. That was the worst thing a messenger ever had to do, tote a baby. "Peanuts" had rebelled in spirit all the way. The roses had long stems, with thorns on them, and he was afraid they would stick the baby and wake it up. He couldn't get to his slip to look closely at the directions, either. All he could do was trudge doggedly on and hope none of the other boys would see him and guy him when he got back.

The lock clicked and he went up-stairs to Number Eleven. The door was opened by a tall, fair girl in a brown apron.

"Peanuts" handed her the baby with a sigh of relief. "Sign, please," he said, digging for his book.

"But, boy, this—this can't be for me," gasped the girl laughingly. "What a darling it is, though. Where did you get it?"

"Here's de card," said "Peanuts" solemnly. She looked at the slip of pasteboard in amazement, then the color rose to her face, what could it all mean?

"Who ever gave you this?" she demanded, severely. "Party's name was Chapin. Here 'tis, signed on de slip. L. H. Chapin."

He held it out for her to see. She knew the writing. Her lips set firmly, as she held the baby out to him.

"You'll have to take it back, boy. I refuse to accept it. I never heard of such a joke in my life. The poor little thing."

But "Peanuts," backed determinedly away.

"It ain't no joke, lady. It's a straight goods, all right. You'd better hang onto it for luck. Maybe's it's a valentine."

Before she could stop him, he was down the stairs and gone. The baby had wakened and was looking up at her with wide eyes still hazy with the soft light of dreams. Somebody started down the stairs above her, and with a sudden sense of the fitness of things in a studio building where no children were allowed, Genevieve hastily withdrew into her own private quarters and shut the door.

Just what to do, she could not imagine. There was no telephone in the house. She could not dress and start off with a strange baby in pursuit of Mr. Leslie Chapin. She sat the baby down in the center of her rug and knelt beside it, taking off the little fur cloak and bonnet. It was a pretty baby. The soft yellow ringlets clustered on its head in loose curls, and its big eyes were friendly and wistful.

"Compliments of the day." That was certainly what it said on the card, written in Leslie's handwriting. And it was quite like him to play just such a joke on her, too. Yet she hardly knew him well enough. To herself she called him Leslie, but they had only met a few times, and then most formally. Surely it was the strangest valentine ever sent. She leaned back her head and laughed. Compliments of the day, and he had sent her Cupid incarnate. The baby turned its head and laughed with her, roguishly as if it were in the joke and understood.

"You darling," Genevieve caught it to her gaily. "I don't know who you are, but we'll be happy together, while they let us, anyway. I wonder what you can eat? Does 'oo like pickles and bananas? I've got some lovely jam, too, and some cold chicken. I'll keep you busy, precious, and we'll have a Valentine feast all by ourselves."

It was after twelve when the little buzzer at the door rang. The baby was sleeping peacefully in the inner room, and Genevieve opened the door. Another messenger-boy stood there. And he bore a note from Mr. Chapin:

I want to come and take you out to luncheon, and I cannot. A ghastly thing has happened to me. I will explain when I see you. Did you like my valentine? I wonder if you know the message its fragrance bears. Send me word by the boy if I may call for you about five. A taxi up through the park, and then—

"Where is the gentleman who gave you this?" she asked the messenger.

"He's with a lady, down at the corner," was the answer. The pencil nearly fell from Miss Hilbert's fingers. But she wrote her answer all the same. It was brief.

You may not call for me at five. I will open a window and shriek for help if you don't come at once, and take away the baby.

Just four minutes later the buzzer sounded many times, pushed by impatient finger-tips. Yet Miss Hilbert was very calm. She opened the door and faced two excited people, a lady, a most charming, youthful lady in gray velvet and blue-fox furs, and behind her was Leslie Chapin.

"Have you got the baby?" cried the former, clasping her hands entreatingly.

"Miss Hilbert, just let me explain," began Leslie, wiping off his damp forehead, but Genevieve laid her finger on her lips.

"It's asleep," she whispered. "Please don't make a noise. Of course I have it. Wasn't it sent to me?"



"Maybe it's a valentine"

The lady in gray sank limply into the nearest chair, and Leslie closed the door. With his back against it, he faced the two, his boyish face full of misery.

"Did that infernal—I beg your pardon—that boy leave the baby here with you, instead of the roses?" he demanded.

"Compliments of the day," quoted Genevieve solemnly. "I have fed it with milk and crackers, and put it to sleep."

"It's all Helen's fault," he explained, desperately. "My sister, Mrs. Warburton, Miss Hilbert. Helen is the mother of the baby, you see, and she left it with me while she went into the hotel for something she had forgotten. I had an appointment, and was tired waiting, so when I gave the roses to the messenger-boy, I gave him the baby, too, and told him to trot it across the square to the hotel, also, and leave it with Mrs. Warburton first."

"He left me a great bunch of red roses," interposed Helen, "and a slip of paper that read, 'Have to be down-town at ten sharp. Here's the baby.' We've telephoned everywhere."

As the lady in gray hurried into the inner room, Leslie looked at Genevieve eagerly.

"Am I forgiven? I wanted the roses to be your valentine. I hoped you would read their message."

"I think that your Cupid carried the message even better," Genevieve put out her hands as the baby appeared in the doorway. "Aren't you my Cupid?"

"Her name is Lilian," said Mrs. Warburton, and wondered why the two in the studio looked amused. "I'll send the roses back. Leslie, why don't you report that messenger-boy?"

"Report him? I'll give him a reward if I ever find him again," exclaimed Chapin fervently. "He's St. Valentine's partner."



"The lady in gray sank limply into the nearest chair"

## Thee

BY BAYARD TAYLOR

The violet loves a sunny bank,  
The cowslip loves the lea,  
The scarlet creeper loves the elm;  
But I love—thee!

The sunshine kisses mount and vale,  
The stars, they kiss the sea,  
The west winds kiss the clover-blooms;  
But I kiss—thee!

The oriole weds his mottled mate,  
The lily's bride o' the bee;  
Heaven's marriage-ring is round the earth;  
Shall I wed—thee?

## The Old Spinnet

BY CATHERINE GRIGGS

In the noblest of our halls,  
Where the summer sunlight falls,  
Stands the spinnet, dark and old,  
Many a joyful tune it's told  
In the dead and silent past,  
In the sweet and mournful past.  
Now I reverend touch its keys,

Lost and gone, their melodies!  
But its ringing chiming note  
On the summer air doth float,  
And its ancient echoing knell,  
Soundeth like a funeral bell!  
So its ringing and its clinging  
Echoes from the buried past,  
From the dead and silent past!

Wondrous magic of thy tune!  
Fades the sunlight and the noon,  
Lighted thou art, by the moon!

Tapestry adorns the halls,  
Covering all the oaken walls,  
And the moonlight! How it's streaming,  
Through the polished halls so gleaming,  
Lighting all the deepest corners  
With a glorious, radiant moonlight!  
With a silvery, ghostly, moonlight!

Now a stately lady enters with a candle  
in her hand,  
Brightly gleaming, radiant candle, like  
Titania's fairy wand.  
Now she stands it on the spinnet,  
Starts to play, and in a minute,  
Rings out loud the melody!  
Shrill and lovely, like the sighing

Of a joyous soul a crying,  
Rapturous, heavenly melody!  
Divine, celestial melody!

Now the fairy music's finished,  
It is gone! Ah, it has vanished!  
And the sunlight floods the hall.  
Out of doors the bees are humming,  
Always going always coming  
Slaves are we and ever shall be,  
Slaves to human destiny!

## Love

BY ELIZABETH BARRETT BROWNING

Unless you can think when the song is done,  
No other is sweet in the rhythm;  
Unless you can feel, when left by one,  
That all men else go with him;  
Unless you can know when unpraised by his breath  
That your beauty itself wants proving;  
Unless you can swear—"For life, for death"—  
Oh, fear to call it loving!  
Unless you can muse in a crowd all day  
On the absent fact that fixed you;

Unless you can love as the angels may,  
With the breadth of heaven betwixt you;

Unless you can dream that his faith is fast,  
Through behooving and un behooving;  
Unless you can die when the dream is past—  
Oh, never call it loving!

## The Voice of Hope

BY EUGENE C. DOLSON

On future prospects fancy loves to build,  
On heart-joys that a coming time will bring;  
When birds are flown and ice-locked rivulets stilled,  
We hear, in dreams, the music of the spring.

## Do Thy Work

BY WHITTIER

Do thou thy work; it shall succeed  
In thine or in another's day,  
And if denied the victor's meed,  
Thou shalt not miss the toiler's pay.



# Don't Die Until You Quit Breathing

By Fred Grundy



EVERY time I go to town I see a lot of old loafers, who imagine they have done their life's work, sitting about on benches and boxes idly gossiping and recounting the mighty deeds done in their young days when they made the earth tremble with their stunning stride. All of these old fossils could do something toward making somebody happier and the world better if they would, but they are too fossilized to be of any use to themselves or any one else. To them nothing is so good as it used to be in the "good old days." And they are everlastingly belittling the efforts of those who are doing all they can to uplift the community.

No one need become a loafer if he has failed to move up to what is termed the middle class of society—that large class of people who are neither rich nor poor, but self-supporting and fairly contented. The principal reason so many find themselves on the poverty line when they pass the half-century mark is because they were determined to have a "good time" when they were young and made no provision for old age. I know men who make five to eight dollars a day right along, and at the end of the year have not saved a dollar. But they have had a "good time" as they went along.

If the man who has to rely upon his muscle or skill for a living and a nest-egg for old age will cut out such utterly useless luxuries as liquors, tobacco, theaters, etc., he can save money. He can accumulate a bank account and a competence for old age. I know an old man who is one of the pleasantest, quietest men I ever met, who told me he began saving his dimes when he was twelve years old with the intention of going into business as soon as he had enough capital to make the venture. When he had saved up a few hundred dollars he found that competition in the line he had fitted himself for was so large that he feared to make the trial. He decided to become a wage worker, and made of himself a first-class clerk and was paid a good salary. He saved as much of this as possible and after buying a home with half an acre of land he had the rest invested for him in good securities by a banker who was one of his old schoolmates. When he became too old to satisfactorily fill his position he retired to his home, and his income is more than sufficient to keep him, his wife and two children in modest comfort. He has a splendid garden and also raises quite a lot of chickens. He has not only made a skilful gardener and poultryman of himself, but is also an expert apiarist. He says he works not to "kill time," but to be of some use in the world. He lives in the present, keeps himself well informed regarding the progress of affairs in the world and is as bright as a young man. He has been a wage worker all his life because he was too timid to join in the struggle of active business, yet he is finishing his days in comfort, because he was wise enough to save. The same route is open to every worker.

I have often advised people who are earning a good salary as bookkeepers, accountants, skilled mechanics, etc., to get out of the cities if they are raising a family. Get into some suburban village within easy reach of the city. Transportation arrangements along the railroads and trolley lines are now such that one can go back and forth without any inconvenience, and the rates are very reasonable. Buy an acre, half acre or quarter of the best land to be had, and plant fruit-trees, vines and bushes first,

then make a good garden. Fence off a narrow strip at one side for a poultry-yard—a narrow strip, as long as possible. It is far better than a small square yard, because it can easily be divided if one wishes to separate the chicks from old stock. In building a fence set good posts eight feet apart, nail three rows of sixteen-foot fencing to them, one close to the ground, one twenty inches above it and one twenty inches above that, and then tack two-inch-mesh poultry-netting four feet high to the boards. This makes a good, cheap, chicken-tight fence.

The quantity of good garden stuff one can grow on a half acre will much more than pay the extra cost of getting to and from one's work in the city.

Then one has the benefit of purer air, there is less noise and uproar, and usually the society is better, neighbors being more neighborly and sympathetic. There is no question that it is far better to live outside the city, when one has young growing children, and I think he stands a far better chance of being able to save a larger part of his earnings. Then there is no training for boys and girls equal to that of having something to care for: Poultry, rabbits, pigeons, or even a small plat of land upon which they may grow something to sell. If they finally get into some occupation where they can have neither animal nor plant they never forget their childish efforts to do something for themselves and the funny blunders they made. And if they ever have the opportunity in after years they surely will go back to the land. The wife of a wealthy banker told me that the little ten-foot garden she tended when she was a child left in her a longing for another like it. And when she finally got into a position where she could have it she wasted no time in getting the necessary tools and once more delving in the soil. She now grows all the vegetables used on her own table just for the pleasure of growing them. She takes as much pride in her neat garden as in her palatial home.

Quitting one's occupation and leaving the city with the intention of making a living from the land is a different proposition. I would not advise any one who has a good position in the city to drop it at once and move into the country to go into truck or poultry raising. If one wants to get away from employment in the city he should by all means hold onto his job until he is fairly established in his country home. He should purchase five or ten acres, on some interurban road and within easy reach of the city, build his house and prepare his land, or have it prepared for him, and live on it and learn how to manage it. He should not attempt anything on an extensive scale, but carefully experiment and learn. When he finally sees his way clear to cut loose from his position and salary, then is the time to do it.

The only way to get such a place is to be about it while on a full salary. One should economize in every way possible to get the little home and tract into his possession. When it is paid for he can feel that he has at least a good anchor to windward in case he is requested to give up his place and salary to some other man. In buying such a spot he can feel that he is simply saving up against a rainy day, and with that end in view can cheerfully forego many little luxuries to which he has always been accustomed. And he will have plenty of work for both body and mind in fitting it up and learning how to make a living from it. I have seen men take two to five acres and make money from them, but they were naturally skilful. And I have seen many more make a nice living from such tracts by growing first-class fruits and vegetables, not in great quantities, but of the best quality.

## How Did You Die?

By Edmund V. Cooke

Did you tackle that trouble that came your way  
With a resolute heart and cheerful,  
Or hide your face from the light of day  
With a craven soul and fearful?  
Oh, a trouble's a ton, or a trouble's an ounce,  
Or a trouble is what you make it;  
And it isn't the fact that you're hurt that counts,  
But only how did you take it?

You are beaten to earth? Well, well, what's that?  
Come up with a smiling face.  
It's nothing against you to fall down flat,  
But to lie there—that's disgrace.

The harder you're thrown, why, the higher you'll bounce;  
Be proud of your blackened eye!  
It isn't the fact that you're licked that counts—  
It's how did you fight—and why?

And though you be done to the death, what then?  
If you battled the best you could,  
If you played your part in the world of men,  
Why, the Critic will call it good.  
Death comes with a crawl, or comes with a pounce,  
And, whether he's slow or spry,  
It isn't the fact that you're dead that counts,  
But only how did you die?

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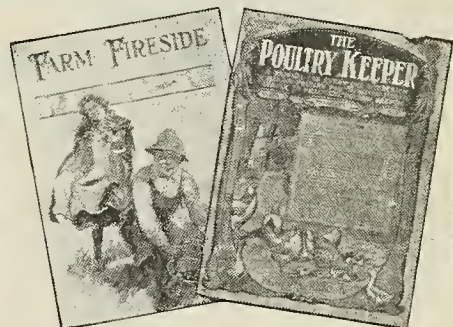


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Springfield, Ohio



# The Mystery of Hillcrest

By Izola Forrester

Illustrated by Henning Ryden



## Chapter III.

THE doctor held aside some heavy oriental drapery at an arched doorway, and Nan entered. It was a small room, evidently used as a sort of retreat. There was a divan, heaped high with velvet pillows. A curiously wrought lamp hung from the ceiling, suspended by chains. It gave a pale, yellow light, hardly sufficient to see by. The walls were hung with rare velvet rugs. A sort of shrine was in one corner, with a screen before it to shield it from casual eyes.

But Nan had no interest save in the figure that lay on the divan. It was Mrs. Sturges. She was dressed for dinner, in a white silk costume, with a costly black Spanish lace shawl draped from shoulder to hip, and falling to the hem of her dress. Her face, as it lay back on the dark red velvet pillows, looked hardly less pallid than her dress. The lace had been torn from her shoulder, and from her throat to her fingers the flesh seemed to have been fairly shredded. Long, narrow gashes had cut into the quivering, white skin, and the blood had stained her gown from top to bottom.

"Is she dead?" asked Nan, her own face scarcely less colorless than the one on the pillow.

Doctor Buell did not reply. Deftly he made a tourniquet from his own handkerchief and tied it above the severed artery in her forearm. Nan obeyed his directions as they were given in brief, almost curt, whispers. About them absolute quiet reigned. When he had finished, he stood erect.

"You go ahead and keep the servants out of the way. Call the maid Villette. She understands. Tell her to prepare her mistress' bed at once. I will stay with her all night and keep watch over this part of the house. Keep the others out of the way. Tell Forbes if he dares to set one foot on these stairs, I will cheerfully throw him down them myself."

Nan hesitated an instant and looked over her shoulder at the narrow darkened passage that led to the other rooms in the tower. There was a heavy, sickening perfume in the air, intangible, redolent of the very spirit of oriental mysticism.

"Shall you dare to leave him alone?" she asked.

"Leave whom alone?"

"Tunga Din."

The doctor looked down at her startled face with an odd expression in his keen, dark eyes. He took her hand in his strong, steady clasp.

"You're letting this place get the better of your good nerves, Nan. I should never have permitted you to come."

"But, doctor, I would have come, anyway, no matter what you said," protested Nan, quickly, "I needed the work, and I am steady nerved, truly I am, only I do not want him to be free. It is wicked for a man like that to be allowed to perpetrate such outrages as this and Kato's death—"

"Nan, be still." In spite of herself, the doctor's will dominated her own rebellious mood, and she listened. "Tunga Din will harm nobody. You understand what I tell you? It is the absolute truth."

"You say that, with her lying there in that state?" For the first time in her life Nan felt a wave of doubt concerning the doctor to sweep over her own common sense.

He smiled slightly.

"Come to the library when Arline is asleep. Perhaps it is best for you to know more, whether you stay here or leave to-morrow."

"Can you leave Mrs. Sturges?"

"I will give her an opiate. The pain and shock have been terrible for her. Do as I tell you, Nan."

The pain and shock? Nan repeated those words to herself, as she mechanically obeyed the directions of the doctor. What could have caused such an accident? What strange, weird power did this Hindoo wield over his beautiful mistress? What was the meaning of that secret shrine of which she had caught a glimpse behind the screen in the tower room? Could it be that Eloise Sturges had become a devotee of Buddha during her dreary, lonely sojourn in the far East? Were there awful penances, secret rites, mysterious ceremonies presided over by the silent, silk-clad Tunga Din, with his heavy-lidded, sloe-black eyes, his inscrutable face, his close, ever-smiling lips that baffled curiosity?

"That automobile was Doctor Buell's, wasn't it?" asked Arline at their supper. "I know, because it is a closed, single one, and he runs it himself. He comes way up here from New York every week, Miss Calvert, and so does Uncle Peter Forbes. Have you seen Uncle Peter? He says some day he is going to marry mama."

"Miss Arline," Villette spoke, sharply from behind the child's chair. "Do not gossip. Miss Calvert, the doctor says that while Mrs. Sturges is resting, I am to put Arline to bed, and he wishes to speak with you in the library."

As Nan went from the room, she caught the look of suspicious inquiry directed at her from the French-woman's eyes. At Mrs. Sturges' door she listened. It was partly ajar. There was a light in the inner room where she lay, but everything was silent.

In the hall below she encountered the new butler who had been engaged to take the place of Kato. He was standing just outside the library door, but moved away at sight of her. She had not spoken to him at all since his arrival, had hardly noticed him, in fact, but now as they passed each other in the hall she caught a glimpse of his smooth-shaven, placid face, and noticed that he looked at her with interest.

The doctor was sitting before the open grate fire as she entered. He looked tired and annoyed. There was a low, smoldering fire in the broad mission fireplace, for the nights were still cool up in the highlands along the river. He arose at the sound of her light step on the polished floor.

"Is she better?" asked Nan anxiously.

"Oh, yes. It is only a flesh wound and a severed artery where the knife struck her."

"Then it was a knife?"

He nodded his head moodily.

"A sort of dagger. Double-edged, but short. They use them in India at the sacrificial ceremonies in the temple."

"Was Mrs. Sturges intended as the sacrifice in this case?" Nan tried to speak quietly.

"No," returned the doctor, smiling slightly. "She was not. It was an accident. She intervened to save

was your father's assistant for just six months when he died, and his last words to me consigned you to my love and care. I have not fulfilled that trust very well, bringing you to this house, have I?"

There was a silence in the great, dim room. Nan laid her hand on his arm to say she would do as he asked her, when suddenly he turned and took her in his arms.

"Nan, would you have the courage to stay here with me? We can send Mrs. Sturges and Arline away in care of a private nurse, and be married quietly at your mother's in Mount Vernon."

Nan's arms lay close about his neck. The tears filled her eyes, as she whispered:

"I would not leave you here alone for the world, Ralph."

A slight cough just outside the window startled them. Standing in the open space that led out on the balcony was Peter Forbes.

"Don't let me interrupt you, doctor," he said.

"I understood that you left here two hours ago," the doctor's tone was harsh with anger, but he controlled himself in Nan's presence. "Go to Arline, Nan, and prepare for an early start in the morning."

Nan had started toward the door, but a word from Forbes made her pause. He stepped leisurely into the room, a half-burned cigar in his finger-tips, suave and self-possessed.

"Just one moment, doctor. I have been smoking out there since the general excitement. I could not help overhearing your conversation with this young lady. The personal side of it I waive, as it does not concern me, but regarding this proposed trip of Mrs. Sturges and her child, I forbid it."

The doctor shrugged his shoulders.

"Forbid it or not. You cannot hold them here."

"Can I not? The law makes me trustee of Arline Sturges' property and safety. She cannot leave this house without my permission. If I choose to do so, I can go before any court and make affidavit that her mother is an unfit person to have control of her—"

"You unprincipled scoundrel—" began the doctor, his fists clenched at his sides, his chin held high.

"Ah, but I can, Buell. Mrs. Sturges is totally unaccountable for her actions. Less than one week ago a shocking tragedy occurred right here at Hillcrest and was smothered up with your connivance. Kato, the Jap butler, was literally hurled from the west tower, with intent to kill. By chance he escaped with a broken leg and general bruising. He was taken that night to a private sanatorium in your own motor-car, tended and rushed westward to the coast in charge of your own trusted nurses, who had orders not to lose sight of him until he was safely on board the Pacific liner, "Manchuria," bound for the orient with just ten thousand dollars of Eloise Sturges' fortune, given him to keep his mouth shut. Am I correct?"

Buell's face never relaxed.

"Go on," he said, in a low tone. "What else have you ferreted out through your spies, to force this poor woman to do your bidding?"

Forbes bit his under lip, but smiled and drew in a deep whiff from his cigar.

"Doctor," he laughed, "you are clever, mighty clever, but I think I have you on the hip this time. The Jap butler, Kato, is not on board the "Manchuria," not even nearing Frisco. He is on his way back East in charge of a private detective to bear witness against the person who threw him from that tower window."

The doctor bent forward with sudden energy and spoke slowly, forcefully.

"Peter Forbes, I beg of you not to push this affair. You have no suspicion of the mystery you seek to uncover. It will do you no good, and only react on innocent parties."

Kato was not badly injured. He would not have been touched if he had kept away from the tower. He went there simply as a spy, at your request, and was thrown out. That is the simple truth."

"Who threw him?" demanded Forbes shrewdly. "I think you did it yourself with the help of that yellow rascal, Tunga Din."

"What is your object in all this?" asked the doctor bitterly. "What good does it do you, Forbes, to hound this little woman's life so?"

"I am going to marry her," retorted Forbes coolly. "And if you attempt to interfere, I will have both you and this Hindoo fakir arrested for trying to obtain control of the Sturges' fortune through the use of oriental tomfoolery and Eastern drugs. Oh, I am no fool, Buell. I'll have every servant in this place to testify against you. I'll make this girl whom you have sent up here as a spy tell what she saw in that tower to-night."

The doctor's face was white, but full of a strange determination. He turned to Nan.

"Do as I told you, Nan, dear. Prepare Arline for a journey. I will take you myself to a place of safety."

Before Nan could leave the room, Forbes drew a revolver and covered her retreat. At the same time he blew a whistle and the door opened, and the new butler appeared, holding two revolvers at the doctor. From the open window sprang another man dressed as a chauffeur.

[CONCLUDED ON PAGE 39]



"... a figure emerged ... and stood ... at the head of the staircase"

the intended victim. Nan, listen to me. I should not have allowed you to come to this house of mystery and sorrow. I fancied you might be a comfort to this poor, distraught woman. But it cannot be. Mrs. Sturges was conscious for a few moments just now, and agreed to my plan. In the morning you will leave Hillcrest forever, I hope. You and Arline are to go to Atlantic City until she can join you there, then take a trip to southern waters on the Sturges' yacht for the winter."

"What will you do?"

"I? I will remain here at Hillcrest with Tunga Din."

"Doctor Buell, why won't you be frank with me?" Nan stood behind the deep-seated leather chair he had moved forward for her, her eyes grave and troubled. "I am not a child. I want to help Mrs. Sturges. I want to help you. Tell me the truth about this place."

"I have no right to tell you anything, Nan. It is not my secret, and professional courtesy alone, apart from the bonds of friendship, demand that I keep silent. You must leave here at once, as I tell you."

Nan hesitated. Almost shyly, her glance met that of the doctor's.

"Must I mind you?" she said. "If there is danger for you here, I—I don't want to go away off in a private yacht. By the time we returned, you might have been killed as Kato was."

"Would you care, Nan?"

"Doctor Buell—"

"You never called me that until you came here. I



# Our Puzzle School

Conducted by Sam Loyd

IN THE old days when two and three cent pieces were in vogue, a little farmer lad of Keyport, New Jersey, who had developed a genius for puzzles, went into a florist's store to sell newspapers, which was a new enterprise the lad had resolved to try. It so chanced that a lady had just purchased a bouquet for thirty-four cents and had a one-dollar bill, a three-cent piece and a two-cent piece. The florist had but two coins in the till, and therefore could not make the change. The bright newsboy had two ten-cent pieces, a five, a two and a one cent piece, and showed them how to clear the financial situation so that every one was left with their correct amount of change. How did they manage to do it?



The above is a picture of the lad as he appeared in 1852; he is still alive and is rated as a several times over millionaire.

## Concealed Geography

The geography class will kindly name the cities, towns, etc., concealed in the following sentences, as explained in the previous lesson:

14. A friend, named Dorcas, owned a red raven named Jehoshaphat.
15. I sailed past Africa, Oceanica I rounded, and came to America.
16. Adam, as customary in Paradise, snubbed Eve.
17. A good nap lessens the length of the day.
18. Napoleon begins as a comet, ends as a falling star.
19. Said Henrietta, "Unto no man give I my heart."
20. I bet he loses the race.
21. France may not bear this rebuff a long time.
22. Is there a railroad over the top of Mount Washington?
23. If we drink too freely of the cask, age racks us with pain.
24. Tell King William to send some officer of rank for the answer of Jules Favre.
25. The ravings of the mob I leave to your imagination.
26. To get gold to par is the secretary's prime object.
27. I saw a little maiden very gaily clad.
28. The Harvard Base-Ball Club is composed of nine vehement strikers.
29. Rent on Cornhill is low, but rent on State Street is high.
30. She was so fond of beer, she baked her pancakes in it.
31. Which do you like best, fricasseeed frog, or ham and eggs?
32. In the days of Queen Elizabeth, Lehens & Co. were jewelers in London.
33. The artist should work with art for duty, not pleasure.

## Twenty-One Palindromes

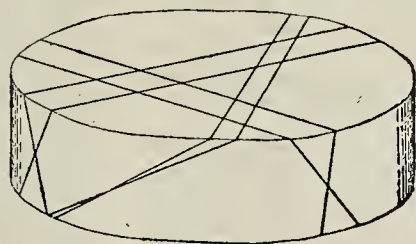
Originally the term "palindrome," which means "running backward," was applied to sentences that read the same from left to right and from right to left. The ancients were very fond of these verbal tricks, and very likely we should be so, too, if the language readily lent itself to them. As a matter of fact, it is very difficult to construct palindrome sentences in English. One of the very few extant examples is Adam's famous introduction of himself to Eve—"Madam, I'm Adam." Here, however, are twenty-one riddles the answer to each of which is a palindromic word:

1. Dean Swift often speaks of an empress whose name,  
Read backward or forward, is always the same.
2. The mother of men was a lady whose name,  
Read backward or forward, is always the same.
3. And Cain took a wife in his exile whose name,  
Read backward or forward, is always the same.

4. And of female recluses we know that the name,  
Read backward or forward, is always the same.
5. When you speak to a lady, you'll find that the name,  
Read backward or forward, is always the same.
6. When a child, you were dressed in a garment whose name,  
Read backward or forward, is always the same.
7. Then, too, you were fed on a diet whose name,  
Read backward or forward, is always the same.
8. You may travel abroad in a carriage whose name,  
Read backward or forward, is always the same.
9. You may pass o'er a flat piece of country whose name,  
Read backward or forward, is always the same.
10. When the lamb trots about by a creature whose name,  
Read backward or forward, is always the same.
11. You may go out and walk at an hour whose name,  
Read backward or forward, is always the same.
12. You may ride at a time that is later whose name,  
Read backward or forward, is always the same.
13. If you shoot off a gun, you'll hear something whose name,  
Read backward or forward, is always the same.
14. And your dog may hunt well, for no longer his name,  
Read backward or forward, is always the same.
15. Your bird, too, may sicken of something whose name,  
Read backward or forward, is always the same.
16. You may quaff of a drink, made of wheat, and its name,  
Read backward or forward, is always the same.
17. Or stare at a giant, whose little, wee name,  
Read backward or forward, is always the same.
18. But this you can't do without something whose name,  
Read backward or forward, is always the same.
19. Whatever your doctrine or dogma, its name,  
Read backward or forward, is always the same.
20. Do but take a sly look, and of this, too, the name,  
Read backward or forward, is always the same.
21. Nay, whatever is done, still believe me, its name,  
Read backward or forward, is always the same.

## A Cheese Puzzle

Into how many pieces do you think it possible to divide a cheese by six straight cuts of a knife? We won't ask you to guess. Here is a picture of the cheese as cut to the best advantage. You can



see some twenty-three pieces, but how many pieces are there which cannot be seen? That is the puzzle.

## Decapitation Puzzle

Now, if you wish,  
Behead a fish,  
"To listen" you'll discover;  
Once more behead,  
And find instead  
A small close chest, or coffer.

## Brain Sharpeners

What pudding makes the best cricket-er? A good batter.  
Why was Moses the most wicked man that ever lived? Because he broke all the commandments at once.  
On what toe does a corn never come? The mistletoe.

Fifty prizes of puzzle books will be awarded to those sending the best answers to the puzzles. Address answers to Sam Loyd, Box 826, New York City.

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THESE rose and other flower collections were grown especially for FARM AND FIRESIDE by one of the greatest nurseries in America, and now offered by FARM AND FIRESIDE without cost to its friends in order to add 100,000 new readers. FARM AND FIRESIDE guarantees that these plants

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4. **White Mamam Cochet**—Snow white, tinged with the faintest suggestion of blush.
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# Miss Selina Lue and the Soap-Box Babies

By Maria Thompson Daviess

Illustrated by Ruth M. Hallock

## CHAPTER VIII.—The Wilted Blossom

"Don't nothing put the heart in a broke-down woman like a little loving."

—Miss Selina Lue.



"... Carrots ... was ... gurgling and wobbling"

'cause I don't want to leave the baby."

"Oh, Miss Selina Lue, is she much sick?" Bennie's freckled face drew up into a knot with anxiety, for Blossom was the core of the green apple that at his age passes for a heart.

"Yes, honey, she's pretty bad, and I feel I must see Miss Cynthia a bit. Now run along; and if you see Mr. Alan, send him to me, too." As she turned Mr. Alan entered the back door.

"How's the Blossom?" he asked anxiously as he deposited his kit in the corner.

"The baby ain't so well," said Miss Selina Lue softly, "I am afeered, and I was jest mean and selfish enough to send fer Miss Cynthia to come down and worry with me. I never did hold with sharing worries, but I didn't expect you back till dark, and it jest seemed like I had to have one or t'other of you a while."

"What did the doctor say?" asked Mr. Alan as he came and stood by her in the door.

There was strength and comfort in the very sight of him, and Miss Selina Lue brightened visibly as she answered.

"Well, Mr. Alan, it do beat everything to me to see a man-doctor flounder around and hunt for what's the matter with a baby. But this young feller, what you and Miss Cynthia say is a specialer with babies, done pretty well, with my helping him along. He says it is pneumony with a long-named side issue to it, what I call jest plain being threatened with bad croup. If it was one of the Tyneses now or Luella Kinney, I would think sure I could pull 'em through; but Blossom looks like she wasn't mixed outen the same ingreints as the other children on the bluff, and somehow—I—" Miss Selina Lue's voice faltered for a moment.

Mr. Alan took her hand in his and said gently: "She is a very special sort of flower, is the Blossom, and we all feel that. Did the doctor say he would rather have the trained nurse?"

"I asked him faithful, 'cause I promised you, but he jest looked at me and he said there wasn't no sich nursing as she had to be bought in the city. And course he knows about you walking her nights and Miss Cynthia a-spelling of us both. Looks like to me, too, that they ain't no nursing in the world that can do as well as what comes from the hand of love—if it is guided by common sense."

"Yes, but skill sometimes is needed in some—"

"Well, ain't skill another name fer common sense? I've done had experience with the lack of 'em both. When Ethel Maud was six months old, Mis Dobbs fed her a little strawberry-preserves, and I thought her time had come when I seed the spasm she went into. After a spell when I got her emptied out and full of hot ginger-tea, she wouder quieted down, but her mother set her afire with a candle she was holding to see if she was a-breathing. And, lands alive, the child was most burned to death 'fore I could put her out! And what with the strawberry poison working on her at the same time she almost passed from us. And there she is alive and a-setting by Blossom as quiet as a mouse to call me if she stirs—baby loving and tending was borned in that child."

"Miss Selina Lue," called a small frightened voice, which was followed by a hoarse cough.

"Watch fer Miss Cynthia and bring her back to my room. There comes Mis' Kinney to sell the suppers! Can't you kinder keep her talking out here? She do make the baby jump so."

Mr. Kent gave up the walk down the river road to meet Miss Cynthia that had been in his intentions for the last few moments and set himself to the task of holding Mrs. Kinney out of the lean-to.

"Howdy, Mr. Alan?" she remarked in a lugubrious tone of voice. "Ain't it too bad that Miss Selina Lue have got to suffer sich a affliction?"

"Well, Mrs. Kinney, I don't think that Miss Selina Lue feels as—"

"Oh, course she don't feel it like it was her own. They can't nobody know the feelings of a mother, lessen it's a father—about half-way."

"I think I should say that Miss Selina Lue doesn't miss much—"

"That's a light view of the case, Mr. Alan. Of course she misses not having children of her own. It's a woman's duty to have children and husbands and—"

"Well, I think we can all acquit Miss Selina Lue of any failure to do her duty by the rising generation, Mrs. Kinney," remarked Mr. Alan in a dangerously

suave voice. He doubly welcomed the sight of Miss Cynthia hurrying down the street accompanied by the anxious messenger, as he was on the verge of a few disastrous observations.

Leaving Mrs. Kinney to attend to the needs of the various supper-shoppers that were approaching the grocery, Mr. Alan led Miss Cynthia to the door of the lean-to and there posted himself as a vigilance committee to insure quiet.

He watched the girl bend over the bed and touch the tumbled curls with a caress that was as light as that of a butterfly's wing, while she slipped her other hand into the one of Miss Selina Lue's that rested on the pillow.

"When did she seem not so well?" she asked, and her voice was low with tenderness—and fear. The Blossom opened her eyes and with a little sigh put her tiny pale hand up to the beautiful face bent over her.

"There, now, that's the first time she's taken any notice to-day!" whispered Miss Selina Lue as Miss Cynthia slipped to her knees and carried the baby's hand to her lips. "Jest look at that, Mr. Alan, if Blossom ain't smiling! I do declare Miss Cynthia and her act like they was twins-in-heart. I suspicion she have been pining fer you all the day, honey, same as the rest of us, only she couldn't ask fer you like we can."

"Well, she sha'n't miss me again, for I am going to stay with her until she is better. What did the doctor say?" Miss Cynthia questioned Miss Selina Lue with a panic of fright in her voice. Beyond, from the door, the dark eyes sent her a sympathetic message.

"He says she has plumb wore her heart out with coughing, but if we can keep her quiet to-night so as



"Miss Cynthia crouched on a low stool by the bed"

to git a little strength, she might come through by morning," answered Miss Selina Lue quietly.

"It is the crisis, and I suppose he counts on her fighting past to-night. The danger is from her heart. He's coming back at ten to see," answered Mr. Alan in a voice as low as that of Miss Selina Lue.

And so the pale Blossom lay in the circle of Miss Selina Lue's arm with one little hand curled around Miss Cynthia's finger, and fought her fight inch by inch—such a desperate piteous fight for the tiny woman. The tall gray figure at the door never left its post, and at a motion of his hand the grocery was quiet beyond any previous experience.

"As for me," said Mrs. Dobbs to Mrs. Simmons, to whom Mr. Alan had quietly delivered the sleeping Clemmie along with the Flarties, to keep until their father's return, "I don't want no sich secret doings over my folks. I think the neighbors oughter be allowed to git some comfort outen setting up with the sick."

"Well, I'm thankful I've got mine all safe," answered Mrs. Simmons as she hugged Clemmie closer, "though, of course, Miss Selina Lue won't take it as hard as if Blossom was her own."

"No, course not," answered Mrs. Kinney as she took her way home to find Luella asleep on the doorstep, and all the other little Kinneys piled on the floor of the stoop awaiting her motherly ministrations.

The waning moon that climbed over the bluff at midnight shone softly across the sill of the wide window in the lean-to and found the wilted Blossom white and suffering, each labored breath shaking the little body with pain; but as the minutes ticked themselves away she lay more quietly and was able to keep back the cough.

Miss Cynthia crouched on a low stool by the bed, her hand still clasped by the tiny fingers, and Miss Selina Lue sat brooding over them both. Her face

in the dim light seemed to Mr. Alan, who kept watch from his post by the door, the personification of all the strength and wisdom and love of motherhood, whose heritage is pain. In the hollow of her strong hand she seemed to hold the frail life, and with the humbleness of a woman, and the faith of a child in her eyes, she was asking for it from One who listens. Once she laid a light covering over the tiny feet, and once she bent and drew Miss Cynthia's bowed head to her breast for a second.

Then came the dawn, quiet and gray. As the soft light shone into the room the baby turned on her side and filled her lungs with a deep breath, then fell asleep, every muscle relaxed, and a faint flush rose on her pale cheeks.

For a few breathless minutes they watched her, and then Miss Selina Lue bent her head on her hand, and Mr. Alan covered his eyes while Miss Cynthia sobbed.

"He's done made us a present of her, children; and I've got His promise to help me git her ready against the time He calls her again," said Miss Selina Lue after a moment, with shining face, and eyes wet for the first time. "Now I must go heat the milk fer her before she wakes; she oughter be strengthened as soon as can be." And she slipped quietly out of the room.

But with her head bent on her arms, Miss Cynthia quivered with suppressed sobs; the agony had been too long for her endurance and she was completely prostrated in the reaction. Then a very wonderful thing happened. She found herself lifted in strong arms, her head laid down on a broad shoulder and warm lips pressed to her tear-flushed cheek. And the strangest part of it was that it didn't seem at all strange—only comforting—and restful—and right.

"Now, that's jest the thing, Mr. Alan," said Miss Selina Lue in a smiling whisper from the doorway. "Pet her up, for she is plumb wore out. Don't nothing put heart in a broke-down woman like a little loving, and that's a rule to act by fer the rest of your life."

Miss Cynthia turned in the strong arms and with a blush that matched the dawn across the river she stretched out her hand to Miss Selina Lue. And then Mr. Alan reached out his disengaged arm and together they drew her into their embrace. "Now, you're getting the benefit of your own advice," said Mr. Alan, as he shyly kissed her on the exact spot on the cheek that Miss Cynthia had finished caressing in the same manner.

"Well, I don't see how the old roof on the grocery is going to hold down so much loving happiness, with the baby gitting well and you two fixed up so satisfying-like. They ain't nothing in the world to draw loving to a head like a pinch of trouble, and love what's felt such a pinch is likely to stay by you fer a spell."

"Oh, Miss Selina Lue—" began Mr. Alan, but suddenly Miss Selina Lue remembered a fact of most material importance.

"Lands alive, Mr. Alan," she said, "I come to tell you if we didn't both fergit to feed and water Charity last night! What will the critter think of our being so keardless of her comfort? Run and tend to her, please, while I open the grocery. Blossom is deep asleep, so you can go with him, Miss Cynthia, fer Charity will be glad to see you two so smiling together."

As Miss Selina Lue softly drew the shutters together to keep out the light, Miss Cynthia followed in the wake of Mr. Alan and the bucket of bran through the garden and up to the barn. It is to his credit that he served the aggrieved though complacent old lady before he threw down the bucket and drew Miss Cynthia to him.

"Tell me," he questioned, "when it happened to you? It was all over for me that first minute when I saw you, past Carrots' red head, standing in the grocery door."

"That dinner—you didn't laugh!" Miss Cynthia hid her head on his convenient shoulder.

"Ah, but I loved you so I could have—"

"Then?"

"Yes, then—and before—since the world was young—"

"Moo—moo," said Charity patiently, for dry brán is not an agreeable breakfast, and the water-barrel stood convenient.

"Do finish feeding the dear thing," insisted Miss Cynthia sympathetically. "Then you can walk up the hill with me. I want to freshen up a little and come right back to watch by Blossom. She will need very particular care to-day, and Miss Selina Lue has so much she must do. Oh, what if she hadn't weathered the night! I think my heart would have broken—watching her struggle—if—if you hadn't been there! Will you always be—there—when things hurt—me?"

"Yes," he answered her quietly, with a deep look into her eyes. "Now let me take you home, for you are hardly able to stand. Promise me to get a good rest, and I will help Miss Selina Lue until you can come back."

And through the early sunlight he walked up the river path with her to the hill mansion and left her at the garden gate among her roses that were no fresher or fairer than herself. She was the incarnation of dawn, and his love encompassed her as the fragrance of her dew-wet flowers.

Below, at the grocery, Miss Selina Lue was busy

[CONTINUED ON PAGE 38]

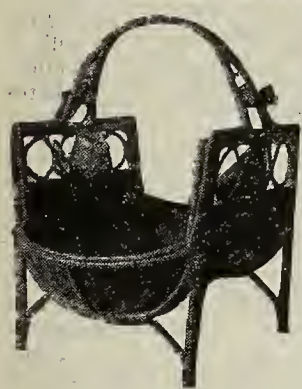




## A Page for Mothers



### Utilizing an Old-Fashioned Fire-Basket



**A** DISCARDED fire-basket, as they call the fancy willow and cane affairs used for wood in the parlor, came my way recently, and I at once saw its possibilities and began to experiment on it.

I found the woven cane lining of the basket badly worn, so I removed this entirely. A few strands of cane, which I keep on hand for repairs, made the few broken places in the body as good as new. This is very easy to do, as one needs only to dampen the cane and weave or wind it in place, tucking the end under and fastening it in place with a tiny tack. After this repair work was done I gave the whole thing a good washing with soap and water, then, when dry, varnished it.

This made it look fresh and new, and here I might say that the basket was well made and an unusually fine shape, making it especially suitable for the mission I intended it to fill.

To line it, in place of the cane I had removed, I took a piece of tapestry that had done service on a couch, but had been taken off because faded on the outside. The wrong side was as bright as ever and a pretty combination of red, gold and brown. This I cut in shape by the old lining, and to make it firm lined it again with plain red cotton fabric. I then tacked this double inner cover in place with very small brass-headed upholster-tacks.

Out of some of the tapestry I made a four-inch square cushion and fastened it by one corner, to one side, just below where the handle joined the main part.

On the opposite side I hung a thread-holder, an odd glass (shaped like a thimble) with a cover in crochet, made in the usual way—out of red cotton luster. Above this spool-holder is a small ring covered with some of the same red, to hold a thimble. Larger rings, worked the same, at either side of the holder, and fastened to the open work, hold the different pairs of shears. Bows of red ribbon finished this attractive work-basket.

H. COOK.

### The Care of the Complexion

**T**HE face should not be washed with soap and water more than once a day, and the best time for that is at night. Use only lukewarm water, for hot water relaxes the skin too much and cold water closes the pores.

While the face is still soft and warm from the washing, an application of a good cold cream, mutton-tallow or a little rose-water and glycerin should be made, rubbing it well in with the tips of the fingers, being sure to always use an upward and outward motion. This is the first principle of massage.

Some skins will not stand glycerin, but redden under its use; good cold cream is expensive and assumes the place of a luxury, but most any one can learn how to make good, pure mutton-tallow, and nothing is better for the skin than that.

Get the best tallow you can buy, and try it out in the oven. When it is thoroughly melted, strain and strain again through coarse cheese-cloth. While it is still liquid, beat as hard as possible with a fork or wire whisk, and at the same time add a little glycerin—one teaspoonful to every cupful of melted tallow. Then add, still beating, a few drops of your favorite scent—violet-extract, lavender-water or rose-water—pour into shallow jars and set aside to cool.

This mutton-tallow is splendid for roughness of the skin and is also excellent for sunburn.

At night, after the little massage, wipe the face gently with cheese-cloth, removing all grease, and after a good sleep, with plenty of fresh air, you will be surprised to see how soft and pink the skin looks in the morning. Some people use squares of cheese-cloth, double and overhanded about the edges. There is no reason why every woman cannot have a good complexion if she will take the trouble to care for it properly.

### The Favored Children

**D**O PARENTS ever notice that they treat their children differently in giving one more privileges than another? Some children in the same home are allowed to do things that others or perhaps one other child would never venture to do and which would not be tolerated in him if he did.

Possibly neither parents nor children recognize this fact. It is something that has developed in the nature of a particular child. He will take more privileges or receive more favors until he expects them and the rest expect him to have them.

In some families this is so pronounced and the difference made between the children is so great that the child who is discriminated against cannot help noticing it. In a certain family where the mother was sick in bed for a long time there were two boys. The older was very fond of his mother and liked to be near her. He never left for school without kissing her good-by and while she was sick he worried so much about her that part of the time he was ill himself. The younger was noisy and loud, and never came into the house without making a great deal of noise. If the older boy made a noise, talked loud or even touched the bed his mother complained and sometimes sent him from the room, while the younger could lie on the bed beside her for an hour at a time and it was all right. Now the older boy could not help noticing this, but the mother never thought anything of it. She just said he made her nervous.

In another family where there are two girls one takes advantage of the other by shirking the work their mother expects them to do. The older one disappears when it is time to wash the dishes and comes back after they are done. If some one hunts her up and tells her to help, she has a convenient headache or some other ailment, and her sister does the dishes alone. MARGARET WHITNEY.

### Girls Should Know How

**A** WOMAN said the other day that she was looking at a beautiful and most elaborate trousseau, when the young thing that was soon to use it said to her: "Yes, I'm as happy as can be; yet I am worried, awfully worried. Fred has a good position, yet he will not be able to have as many servants as I am used to in our own home. The truth is we will only be able to keep one girl. She is to be my maid; she was mother's chambermaid, and she does not know the first thing about cooking. And poor me! Why, I don't even know how to make a cup of coffee."

It seems reasonable to suppose, in the light of this confession, that she was justified in believing that the man who married that girl would have some fearful and wonderful experiments tried out on his digestive apparatus before that trousseau had many worn threads. So long as they are traveling on their honeymoon and a well-paid hotel chef prepares their meals for them, all well and good; Nancy will have no fly in her honey so long as Henry buys ready-made table-d'hotes.

### There is a Limit to Everything

The fly, on the other hand, will get into Henry's honey when they settle down to housekeeping; if you can dignify such an existence as they will lead by that name. Those biscuits and that pie-crust and the cake! Love lingers long and endures much, but there is a limit. And by and by when a particularly soggy dinner lays unbearably heavy on Henry's stomach he will say something that will lay equally heavy on the hearts of them both.

Some time ago Doctor Wylie, the government chemist, said that bad bread was the cause of most of our divorces. Possibly, to make his point the more promi-

nent, he exaggerated a condition. However, be that as it may, the fact remains that the bride's lack of knowledge and experience in the culinary department often opens an unfortunate breach in the spontaneity of love between husband and wife.

Forty, thirty, even a score of years ago the girls were given a better domestic education and training than they are now. And this fact leads to a great many unpleasant and undesirable conditions in the domestic life, not only of the girls grown older, but of those with whom they associate, no matter in what relation, later in life.

### Whose Fault is It?

Both mother and daughter; the mother in the beginning, the daughter later. Every girl, no matter what her "station" in life, should have an intimate acquaintance with household economics. It is taught in the schools. Yes; but it can be taught nowhere so well as in the home.

The arrangement to secure domestic education in Germany, though different from our own, is not only effective, but admirable in its results. There they send the girls into the houses of their friends, and they remain there a year, or until they have learned household duties thoroughly. The result is that, as a nation, there are no better housekeepers in the world than the German women.

In Japan, the nation that recently astounded the world with the prowess of her men, they have a custom of sending the girls of the lower families into the families of the better class, there to learn good manners and to perform all household duties correctly, from the position of lady's maid to that of serving-woman in the scullery. She is taught how to cook as the main part of her "apprentice" education as a housekeeper, and it is a notable fact that in Japan there are no matrimonial troubles attributable to poor cooking.

### How Japanese Girls Are Trained

The Japanese girls are also taught to serve in any capacity, and not only to serve well, but willingly; this last being one of the main features of the training. They have a fear that their children will have too easy a time of life when young and that, therefore, they will grow up to be indolent, lazy and worthless. The scheme certainly has more than passing merit, for the Japanese are known as the most active and tireless nation of people in the world.

If the American mother entertained a little more of the Japanese fear of her daughter having too much of an easy time, the daughter would in the end make a better housewife and helpmate for her husband. It is very censurable, to say the least, for the mother to allow her girls to grow up feeling that some one else will always do the work for them, that all their difficulties will somehow be smoothed out, that fun and frolic and music lessons and novel reading is all they need think of, and that each one of the children does not have their small individual duties to perform, just as the grown-ups have their larger ones.

We often hear it said of the girl who pounds the piano or lolls about in her good clothes, while her mother works and slaves and sweats and worries in the kitchen, that she is too proud to work. Too proud! No, no! she is not proud. She has no pride—she is lazy, too shamefully lazy to work.

If she had any pride about her, any pride in her home, any pride in being something rather than a drone, any pride in her sex, she would be right there in the kitchen, or wherever the work called, alongside her mother, doing her share of the work and incidentally learning lessons that will later be as gold in her hand, that will equip her as a homemaker, a wife to be desired, a mother proud of her training, and all in all, make a better and a nobler woman.

JESSIE B.

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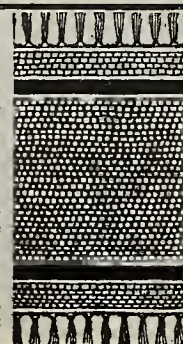
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## Things Worth Knowing



### The Old Oaken Bucket House

By H. H. Harbour

IN THE old seaside village of Scituate, Massachusetts, there is to-day a small farmhouse painted white, with bright green shutters, that looks not a whit unlike a hundred other farmhouses in New England. Back of the house, and close up under its shadow, is the well, evidently of an older generation than the house, but not at all more remarkable. There is the familiar wooden curb covering its mouth, the long sweep, weighed down with stones at one end, and from the tip of the long pole at the other end, holding poised the wooden bucket over the spring of water below.

But if a chance passer-by should stop in for a drink from the old well, he would be surprised to find the bucket marked by a large metal plate, and on the plate the inscription, "Old Oaken Bucket—1817." And he would have to be a very chance passer-by, one out of a thousand, indeed, to whom, after reading this inscription, a drink from the bucket could taste quite the same as ordinary water. For although those that have seen this well are comparatively few, fewer still are those that have not sung its praises:

"The old oaken bucket, the iron-bound bucket,  
The moss-covered bucket that hung in the well."

The words have touched a sympathetic chord in the hearts of hundreds of thousands who have been born and bred in the country, but whom necessity compels to pass the greater part of their lives in the city. And this is the well that inspired Samuel Woodworth, the author of the poem, to write the thrice-familiar words.

However, it must be confessed that the bucket is not the same that Woodworth immortalized in his poem. The old one gave way before the ravages of time—and of the souvenir-hunter—years ago, and has been replaced by the present one, a gift, with the plate upon it, from a firm manufacturing woodenware in distant Richmond, Virginia. The rest of the well, the curb, the sweep, and even the chain, are the same that the poet hailed, when "often at noon, returned from the field," he "found it the source of an exquisite pleasure."

Other landmarks celebrated in the poem are in the immediate vicinity. Only a stone's throw down the village street is "the wide-spreading pond and the mill that stood near it." The pond is known to-day as "The Old Oaken Bucket Pond." The mill is interesting, being one of the oldest water-mills standing in the country. It was built in 1640, but hardly looks that old on the outside, so many hundreds of times has it been reshingled. The dusty road that separates the mill from the pond passes over the bridge mentioned in the poem, and in another corner of the pond is "The rock where the cataract fell" and beyond, "the deep tangled wildwood."

Samuel Woodworth, the author of the poem, was born here in Scituate in 1789. His childhood was passed on his father's farm, working hard for nine months in the fields and for the other three months acquiring the scanty education that the country school afforded. He was only fourteen years old when his first verse attracted the attention of the man who was both schoolmaster and pastor in the little town, the Rev. Nehemiah Thomas. This man persuaded Samuel's parents to let him undertake the lad's education for a year, and with their consent he gave the boy a good elementary knowledge of English grammar and Latin.

He won himself a reputation, but little profit. To-day the great bulk of his work has been forgotten; but one brief poem, "The Old Oaken Bucket," survives, yet that is enough.

### Where Binder-Twine Comes From

By Charles Alma Byers

THE United States every year imports from Mexico sisal fiber to the value of about fifteen million dollars to be manufactured into binder-twine, for which the farmers of this country pay more than twenty-five million dollars. In addition to this, a large quantity of the fiber is imported for the manufacture of ropes, cordage, mats, hammocks, saddle-pads, brushes, ore and grain sacks, cloth, etc. The fiber is received almost exclusively from Yucatan and ninety-five per cent of the yearly output of that country is taken by the United States importers. Sisal fiber is produced from a plant of the maguey family. The photograph below illustrates a specimen four years old. The plant possesses sword-like leaves which shoot out in every direction from a pulpy-like knot that rests directly on the surface of the ground. The leaves are stiff, dark green in color and are edged with saw-like spines. The plants, belonging to the cactus family, grow wild on many of the desert areas of



Maguey, or Fiber Plant—A Specimen Four Years Old

Mexico, and are proof against droughts, rainfalls, insects and weeds.

The fiber industry of Yucatan, and some of the other sections of Mexico, however does not depend upon the plants growing wild. Instead large fields are set to young plants, and these fiber plantations are guarded and cared for as valuable treasures, which indeed they are. The maguey plant is best propagated from cuttings or "suckers." The "suckers," or shoots, sprout up around old stalks, and when about fifteen inches high they are ready for transplanting.

The fiber is obtained by running the leaves through a cleaning or shredding machine, which strips off the green vegetable pulp. Each leaf produces a long skein of silvery-white fiber. The daily capacity of each of these machines is about sixty thousand leaves. A first-class five-year-old plant will possess about one hundred and fifty leaves, and each leaf will produce about ninety ounces of dry fiber. Aside from the fiber, the crop is valuable because of the pulp, which is excellent feed for cattle, or it can be manufactured into glue and fertilizer.

One acre of ground planted to maguey will produce from one thousand to twelve hundred pounds when five years old, and the fiber is marketed at about six cents per pound. United States currency. The total cost of harvesting and shredding is about one and a half cents

### Speed of Birds and Animals

By John T. Timmons

THE speed attained by various birds and animals is certainly very interesting. In some instances it has been hard to determine just how fast some creatures do travel, but in most cases it can be ascertained, and we give a few of the best known.

A riding-horse covers forty inches while walking, while at a jog trot it covers eleven feet in a second. The two-minute horse covers forty-four feet in a second.

The leisurely ox moves only two feet a second when hitched to a wagon, and about twenty inches when attached to a plow.

The elephant, which can pull more than six good horses, moves about four and one half feet in each second, and running as rapidly as it can, it is able to travel but eighteen feet a second.

The dromedary is said to be able to travel ninety-three miles in sixteen hours, which is considered a day's march. It is able to continue this for from two to five days. It is said certain dromedaries have covered as high as one hundred and seventeen miles in twelve hours.

Different breeds of sheep-dogs and hunting-dogs have been known to make from thirty-three to forty-five feet a second, but some of the swiftest hunting-dogs have made as high as eighty feet a second. An English fox-hound has covered sixty feet in a second.

The lion is claimed to run faster than the swiftest hunting-horse, and goes from eighty to one hundred feet a second, according to the country through which it is compelled to travel.

The mole, in its extensive subterranean diggings, which are from one hundred to one hundred and fifty feet in length, moves at the rate of six and one half feet a second. On the surface the mole can travel from ten to twelve feet a second.

People differ greatly in their opinions as to the speed of the hare. Some claim it can travel at the rate of sixty feet a second, while others claim it cannot travel more than half that distance.

The great variety of deer are all quite speedy, but in certain localities they can travel much more rapidly than in others. A roebuck has been known to cover seventy-four feet a second when pursued by dogs.

The wonderful little antelope can cover from twenty to thirty feet at a single leap, springing nearly ten feet in the air, and it can only be captured by the swiftest dogs when it is greatly fatigued.

The giraffe is said to pass over the ground at the rate of about fifty feet a second, while the leaping kangaroo covers ten to fourteen feet a second.

The wonderful bird, the ostrich, is swifter than all the animals, and has been known to make one hundred and sixty feet in a second, or a mile in a little more than half a minute.

The tortoise is much slower. One five inches in length covers but about half an inch in a second.

Reptiles have various speeds. Some are quite slow, while others are known to make considerable distance in a given time. The rattlesnake moves in a curved line four inches a second, but when after its prey it may travel from thirty to forty-six inches in a second.



The Old Oaken Bucket House in Scituate, Massachusetts

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# Madison Square Patterns



FASHION is again looking with approval on the separate waist. Every little while the cry goes up that the separate waist is doomed, and women hear a great deal of talk for the time being on the vogue of the costume. Just at present the idea is to have the waist and skirt separate, but the waist matching in color, or surely blending with, the skirt.

The separate waist shown in illustration No. 1462 is an extremely pretty model. The material may be silk in a solid color, with the yoke, collar and very deep cuffs of Persian silk, plain silk braided or all-over lace. The pointed bertha, which is in the form of revers, may be tucked chiffon with a binding of the silk or a silk cord. The deep cuffs may be omitted if one prefers a waist with sleeves ending just below the elbow.

Many of the new waists are veiled with chiffon and this is an extremely good way of remodeling an old silk waist.

The cotton waists for spring do not show any startling changes. Many tucks and plaits are introduced, and in the plainer waists the sleeves are all long, many finished with turned-back cuffs.



No. 1462—Waist With Pointed Bertha

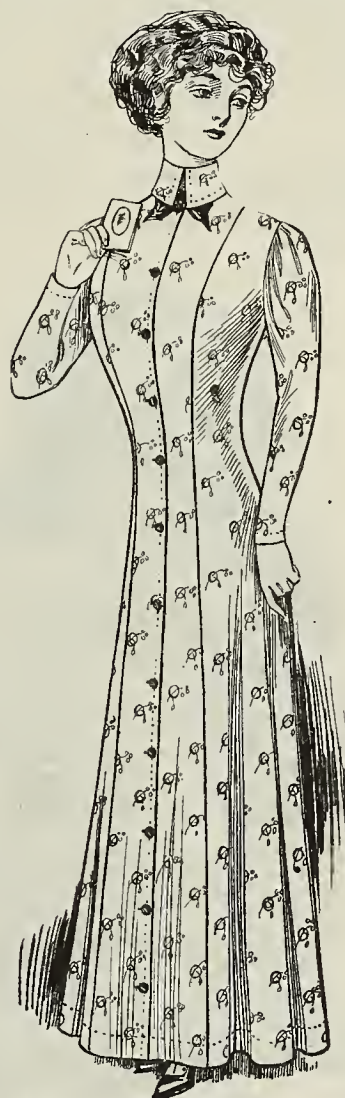
Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and five eighths yards of twenty-two-inch material, or one and seven eighths yards of thirty-six-inch material, with one yard of all-over lace and three fourths of a yard of tucking.

This waist may also be used as a design for a lingerie model, having the material batiste or fine lawn and using all-over embroidery for the yoke, collar and deep cuffs, with fine tucking for the pointed bertha

EVERY woman is looking for a dainty, trim wrapper that will not be too negligée, and which she can slip on for breakfast and wear comfortably afterward when working about the house. Three things are to be considered—simplicity, daintiness and comfort. A wrapper conforming to all these requisites is illustrated on this page, a wrapper, too, that every woman can easily make herself. A strong point in favor of this wrapper is that it opens from the neck to the hem and that there is no lace or embroidery to get torn or be in the way.

It is so easy to slip on this wrapper, and laundering it is really no trouble at all, for it can be ironed flat, which is quite a consideration. The long lines will be very becoming to almost every woman and will give the stout woman a tall and slim effect. Then the tailored collar gives such a trim finish to the neck, and a tie a little darker in shade than the wrapper will just give the necessary finishing touch.

Flowered outing flannel for winter, and gingham or percale for warmer days, would be good materials for this wrapper.



No. 1476—Princess Wrapper—Seams to Shoulders

Pattern cut 34, 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 38 inch bust, nine and three fourths yards of twenty-four-inch material, or six and one fourth yards of thirty-six-inch material

No. 1470—Child's Yoke Dress—Sleeves in Two Styles

Pattern cut in 1, 2, 4 and 6 year sizes. Quantity of material required for medium size, or 2 years, two and five eighths yards of twenty-four-inch material, or one and three fourths yards of thirty-six-inch material

## Madison Square Patterns

IF YOU do not know the Madison Square patterns, get acquainted with them. You will find it to your own advantage in the end. They are simple to use, accurate in every way, and their price is but ten cents each. We can furnish a pattern for every design illustrated on this page. Full descriptions and directions come with the patterns as to the number of yards of material required and how to cut, fit and put the garment together. The pattern envelope shows a picture of the completed garment. All of the pieces of the pattern are lettered so that even if the collar in the pattern should look like the cuff, there is no possible way of mistaking one for the other, for each bears its own letter identifying it.

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Back View of No. 1476

This illustrates the long, graceful lines to the shoulders that make the wrapper such a trim-looking gown for home wear. There are inverted plaits at the center of the back below the waistline.



No. 1472—Petticoat and Underwaist—With or Without Sleeves

Pattern cut for 2, 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 6 years, two and three eighths yards of twenty-seven-inch material, or two yards of thirty-six-inch material



No. 1474—Girl's Dress With Round Yoke

Pattern cut for 6, 8, 10 and 12 year sizes. Quantity of material required for medium size, or 8 years, three and five eighths yards of twenty-four-inch material, or two and three fourths yards of thirty-six-inch material, with one fourth of a yard of contrasting material for yoke and collar

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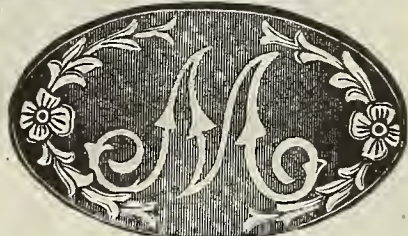
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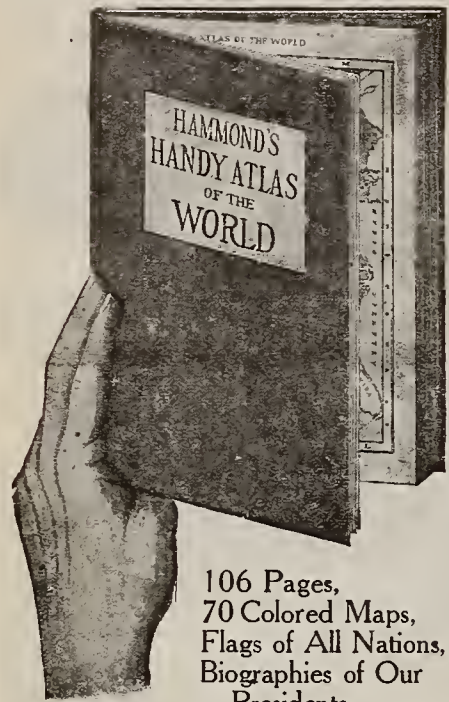
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# Miss Gould's Dressmaking Lesson

Two Smart Waists Made From One Pattern

THE woman who has little money to spend on her clothes will find that she can make that little go farthest if she uses the Madison Square Patterns. These patterns cost but ten cents, no matter how elaborate the model, and very many of them are so adaptable that two entirely different garments can be made from the same pattern.

In the case with the smart-looking waist pattern illustrated in two attractive ways on this page. It can be made of silk or net and made with a round yoke and having, as an original touch, buttoned-over front. The pattern may be fastened with big jet buttons.

The pattern can be transformed into a strictly tailored shirt-waist with the tabs and the lace trimming omitted. This latter waist is specially suited to the new cotton waists, which nowadays are so inexpensive and yet so extremely attractive.

Pattern No. 1374, Tucked Waist With or Without Yoke, which is illustrated on this page, is cut in five sizes—for 32, 34, 36, 38 and 40 inch bust measures. It may be ordered from the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City. The price is ten cents.

The pattern envelope contains seven pieces. Each piece is lettered and referred to by letter, so that it would be impossible to confuse one part for another. In waists of this description, where there are different sections that look somewhat alike, this system of lettering is particularly useful.

The front is lettered V, the side front W, the side back Y, the back T, the collar L, the belt X and the sleeve K.

Smooth out the pieces of the pattern carefully, removing all the wrinkles in the tissue before placing them on the material. In cutting, lay the edges of the collar and the front marked by triple crosses (XXX) on a lengthwise fold of the material. Place the other parts of the pattern with the line of large round perforations in each lengthwise of the goods.

Be sure to mark all the perforations and cut out the notches before removing the pattern pieces from the material.

### To Make the Waist With Yoke

First slash the side fronts and side backs as the pattern is slashed, to form the tabs. These slashes extend as far back as the lines of small round perforations. The tabs may



No. 1374—Tucked Waist With or Without Yoke

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four and one eighth yards of twenty-four-inch material, or two and one half yards of thirty-six-inch material, with one half yard of all-over lace for trimming.

This pattern costs ten cents, and can be ordered from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

be bound or piped with contrasting material or they may be faced. Care should be taken, in finishing the tabs, to keep the points straight and even.

Form the tucks in the front and back sections of the waist by bringing the corresponding lines of triangle perforations together. Stitch the tucks in the side fronts and side backs, but only baste the tucks in the front and backs. After the tucks have been formed, press them flat.

Arrange the front on the side fronts, bringing the edges of the tucks on the front to the lines of small round perforations on the side fronts. Baste firmly along the edges of the tucks, and then stitch them securely to position three fourths of an inch in from the edge. The bastings that you put in to form the tucks in the front will indicate the line along which they are to be stitched down flat to the side fronts.

Arrange the backs on the side backs in the same manner as instructed for the front. After the backs and front have been properly adjusted, work buttonholes in the tabs, back and front. Button the tabs over on the backs and front as shown in the large illustration.

To form the yoke, face the waist from the upper edge, back and front, to the lines of small round perforations with lace.

Join the shoulder and under-arm seams of waist. Bring the lines of small round perforations together, and baste along these lines.

Gather at the waistline between double square perfora-



Tailored Shirt-Waist

This Waist Can Also Be Made From  
Pattern No. 1374

should be fastened invisibly with hooks and eyes. Small pearl buttons and loops may be used on the back of a madras or linen waist.

### To Make the One-Piece Sleeve

A special feature of this waist is the one-piece sleeve. Many of the new sleeves are made in two pieces, with the seam extending to the arms-eye at the back. This seam often interferes with the pattern in the material, and if the fabric happens to be semi-transparent, gives an awkward-looking line on the arm.

In a one-piece sleeve of this description there is no seam at the back above the elbow, and the tucks extend around the arm in symmetrical effect.

Form the tucks in the sleeve by bringing the corresponding lines of triangle perforations together. Stitch on these lines. One illustration on this page shows just how the sleeve looks after the tucks have been stitched.

Join the inside seam of sleeve as notched, and close the dart at the back of the sleeve by notches. Face the sleeve from the lower edge to the lower line of triangle perforations with lace to form the cuff.

Gather the sleeve at the upper edge between double crosses. Arrange the sleeve in the arms-eye, holding the sleeve toward you. Pin the front seam of the sleeve at the notch in the front of waist. Bring the top notch in the sleeve to the shoulder-seam, and pin securely. Pin the plain part of the sleeve smoothly in the arms-eye. Then draw up the gathers to fit the remaining space, distribute the fullness evenly, and pin carefully before basting.

### To Make the Tailored Waist

Pattern No. 1374 may also be used to make the tailored shirt-waist, and only slight changes are required to transform the model into this design.

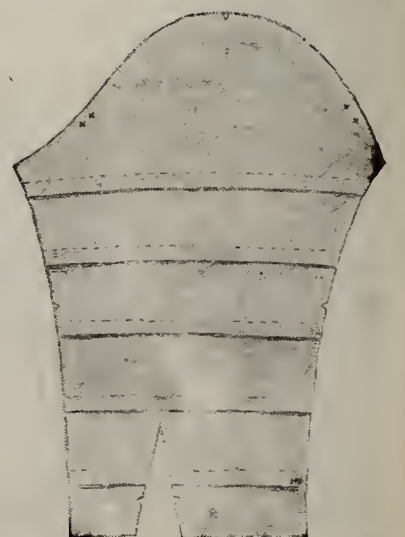
The yoke and cuffs are omitted and a linen collar should be worn. The neck of waist should be bound.

The tabs, too, are cut off. This is done by cutting the front edges of the side fronts and the back edges of the side backs straight, removing the points of the tabs. When cutting the material for the tailored waist, do not slash in at the sides of the tabs.

The tucks in the side fronts may terminate at the bust-line as shown in the illustration. This gives additional fullness and is more becoming to a slender figure. Other variations of pattern No. 1374 may be made by omitting the yoke and retaining the button-over tabs. Or the tabs may be cut off and the yoke used only in front.

There is a seam allowance of three eighths of an inch on all edges of this pattern, except at the shoulder and under-arm seams, where one inch is allowed, designated by lines of small round perforations. This additional inch is allowed as a safety outlet. As all the fitting that is necessary to do on this waist must be done either on the shoulders or under the arms, the extra width at these two points is very necessary at times. Of course, after the waist has been fitted, these seams may be cut off and only the three-eighths-of-an-inch seam permitted to remain.

Miss Gould will be glad to answer any questions pertaining to home dressmaking which may perplex the readers of Farm and Fireside. She will send by return mail a personal letter to the writer if a stamped and self-addressed envelope is enclosed. Direct all letters to Miss Gould's Dressmaking Department, care of Farm and Fireside, 11 East 24th Street, New York City



Showing the One-Piece Sleeve Flat After  
the Tucks Have Been Put In



# SUNDAY READING

## Justice and Love

IF THERE is anything taught by Nature and Providence it is that God is a God of justice as well as of love; that when love rules in heaven and puts its soft arms around men and lays its soft hands on men, there are bones in those arms and in those hands; that love means truth; that love means justice, that love means government; that love tends to produce the one and the other all the way through, and that there is no difference between them. Love working by enforcements is justice, and justice working by kindness is love. They are not to be separated.

There is nothing that you are more sensitive to than the excellence of those you love most. You cannot bear that those whom you love should not be pure and true. You can tolerate imperfection in any others better than in those whom you love. You want them to represent your highest ideal.

Take the familiar instance of a mother. I think that a great-minded woman, who is all but a Christian by nature and is then enriched by grace, and brought into the conscious sympathy and affinity of the Lord Jesus Christ—I think, that such a woman administering in the household presents the best conception of moral government and the best conception of mediatorial work and the best conception of atoning love which it is possible to present on earth. Men have gone to kings to get it; I go to my queen. Men go to states; I go to my household. You shall nowhere find a pattern so near to the Lord Jesus Christ, and to the grounds and reasons of moral government in the atoning grace of the Lord Jesus Christ, as in a great, rich, right, sweet-minded woman, who is bringing up her household of perhaps six, seven, eight, nine, children. And the illustration is all the more striking where, as is sometimes the case, a woman does this with poverty in her own family, and yet is sweet-minded and is always working, though never for herself, and is never weary, and is willing to be interrupted by this, that or the other one and is always living for others, in others, under others, spending or being spent to lift up those who are weaker than she—those that first drew nutriment from her breast and who all the rest of their days have been drawing light from her heart of love, she continually pouring out the spirit of love for them.

And yet does she not bring tears from them, is there anybody else so rigorous against meanness as she? Oh! how she hates it in her children! But does she gnash her teeth at them because she hates it? Does she smite them? Yes, sometimes; and she ought to; for she cannot always get along without it. If the infliction of physical pain can be avoided, it is better to avoid it; but there are times when it must be resorted to. But this is the thought, that in the administration of love in the family, pain and pleasure are instruments, alternatives. And for the sake of what? For the sake of making suffering? For the sake of satisfying a broken law of the household? For the sake of vindicating the dignity and personality of the mother? No. The end of her administration is to work those children up to a disposition "of love out of a pure heart, and of a

good conscience and of faith unfeigned;" and she administers to that end, mingling all the time with her administration truth, purity, duty and integrity. And her sternest moments of integrity are wrapped about with the atmosphere of love and goodness. And you cannot take the two elements apart. There she stands in the household and is God to those children until they have grown up; and her example there is one of beneficence and furnishes the best conception that we can have upon earth of a government which consists of self-sacrifice, of living for others, of pouring out one's life for others and of administering so as to bring them up from their low estate to a life of excellence. No king, no schedule of kingly government, ever came half so near to representing the divine government as this mother's administration in the household.—From Sermons of Henry Ward Beecher, published by the Pilgrim Press.

## Ignoring the Failure

WHEN a person has utterly failed, the best way to help him may be to show just as much confidence in him as though he had never failed. God uses this method to help us up from our failures a great deal oftener than we use it with our fellow-men. If God dealt out to us only condemnation, and instant condemnation, every time that we fail in His sight, we should not last long. Yet that is the way we are inclined to treat each other. And that is one reason why we help each other so much less than we might.

A man who was failing badly in ways that undermine character was unexpectedly given a halt in his failures, put squarely on his feet, faced right about and enabled to replace his defeats with victories, by the fact that God sent him, not condemnation, but blessing of a rich and undeserved sort. We have all had that experience at our heavenly Father's hands. He trusts and encourages us a hundred times for once that He rebukes or condemns. Why should we not help others toward victory in God's own way?—The Sunday-School Times.

## I Want to Trust Thee Now

I WANT to trust Thee now, dear Lord, Now, while the way is dark, And not a gleam mine eye can see The narrow path to mark; I want to trust Thee all the night, For the day comes on apace When faith and trust shall fade before The shining of Thy face.

I want to trust Thee now, dear Lord, While faith and trust may be, While drear and sullen are the skies That hide Thy face from me; For from these clouds shall break the sun In wondrous splendor bright, And o'er the mountain-tops afar Shall haste the shades of night.

I want to trust Thee now, dear Lord, And feel no doubt or fear, For short the time that I may trust In lonely darkness here. And, oh, when breaks the light of day And my glad eyes shall see, What joy will take the place of faith Because I trusted Thee! —Mary Rolofson in The Sunday-School Times.

## Let It Go

DO NOT hang on to the things that keep you back, that make you unhappy. Let go of the worry; let go of the anxiety; let go of the scolding, fretting and fuming; let go of criticism; let go of fear; let go of the anxious, overstrained life; let go of selfish living; let go of the rubbish, the useless, the foolish, the silly; let go of the shams, the shoddy, the false; let go the straining to keep up appearances; let go of the superficial; let go of the vice that cripples, the false thinking that demoralizes, and you will be surprised to see how much lighter and freer and truer you are to run the race, and how much surer of the goal.

If you have had an unfortunate experience, forget it. If you have made a failure in speech, your song, your book, your article, if you have been placed in an embarrassing position, if you have fallen and hurt yourself by a false step, if you have been slandered and abused, do not dwell upon it. There is not a single redeeming feature in these memories, and the presence of their ghosts will rob you of many a happy hour. There is nothing in it. Drop them. Forget them. If you have been indiscreet, imprudent, if you have been talked about, if your reputation has been injured so that you fear you can never outgrow it or redeem it, do not drag the hideous shadows, the rattling skeletons, about with you. Wipe them out. Forget them. Start with a clean slate and spend all your energies in keeping it clean for the future. Do not let the little enemies—worry and foreboding, anxiety and regrets—sap your energy, for this is your capital for future achievement.

A gloomy face, a sour expression, a worrying mind, a fretting disposition, are proofs of your failure to control yourself. They are the earmarks of your weakness, a confession of your inability to cope with your environment.

Whatever is disagreeable, whatever irritates, nags, destroys your balance of mind, forget it, thrust it out. It has nothing to do with you now. You have better use for your time than to waste it in regrets, in worry, in useless trifles. Shut the door in the face of all your enemies and keep it shut. Do not wait for cheerfulness to come to you. Go after it, entertain it, never let it go.—From "The Optimistic Life."

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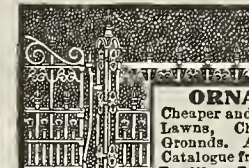
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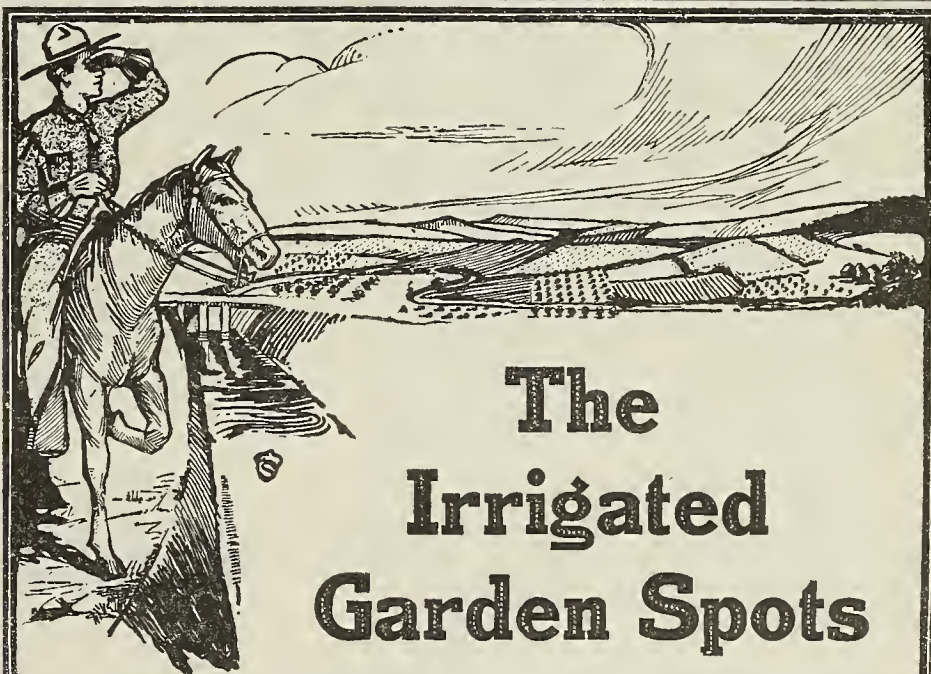
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# OUR YOUNG FOLKS' DEPARTMENT

## Mr. Owl's Skating Lesson

MR. OWL he got a mighty funny sight in de eyes, an' it happen dis way.

Once 'pon a time de owl he say to hisself, "I wants to larn how to skate. I wants to fine out how to cut de figgers on de ice same as de udder fellers, an' I'se gwine take some lessons; dat I am," say de owl.

Now Mr. Cat he a putty fine skater. He's tuck mos' de prizes at de skatin' races; so Mr. Owl he go to de cat an' axes ef he gib him lessons.

De cat say he powerful tickled to gib de fust lesson nex' mawnin' at leben o'clock. So dey goes to de pon' nex' mawnin' at dat time.

De owl he a heap feared o' de ice; but he git he skates strapped on an' de cat starts in wif de lesson.

"Gracious lan'!" say de owl. "Wot'll I do? My two footses goes in a diffunt direction at de same time, an' dey's almighty cold, dey am!"

"Wal, I reckon yo's got yo' straps too monstrous tight," plys de cat. So de owl fixes de straps an' starts in tryin' ter skate.

"Ef yo' doan' wanter fall an' crack de back o' yo' head," splains de cat, "ben' forrard. Den yo' fall on yo' face, an' yo' not git hurted. Keep yo' knees straight; hole up yo' head, an' doan' keep lookin' at yo' footses all de time; take a long stroke wit each



"... down he go an' hits de back ob he head!"

yo' footses one arter de tother; yo'll git confidence arter a while; but doan' go tryin' it alone tell

daytime's ober. Mr. Owl's big yaller eyes am putty bright dest 'bout dat time. I tells yo' dey am dat!

By Alice Jean Cleator

yo's had two, free, mo' lessons," say de cat.

Wal, de owl he takes anudder lesson, but by dis time he got sich a hifalutin' pinnation ob his own wisdom dat de nex' mawnin' early he thinks he go tryin' it alone.

He gits outen on de ice an' goes takin' de fust stroke, when both he footses slips out at de same time, an' down he go an' hits de back ob he head!

"O-o-o-oh! O-o-o-oh!" hollers de owl, I wish to my landy sakes I'd done as de cat feller say! 'Pears to me I'se sholy kilt in de head!"

So de owl he tuck an' goes to de bear what makes a specialment ob de eyes, an' axes him what he kin do fo' him.

"Wal, to be honest wif yo'," say de bear, lookin' terrible solemn like at de owl, "I caint do nuffin' in creationment fo' dem eyes. Yo's hurted de hoptical narve, an' hit's gib yo' a peculiarmint ob de sight. Yo' nebbber be able to see much in de daytime. Yo'll hab to hide in de big woods an' de evergreen swamp thoo de day, an' do yo' huntin' at de twilight time. Dat's what yo' will," say de bear.

So dat's de reason de mink an' de skunk an' de brown bunny an' all de udder leetle wood fellers hab to look out fo' ol' Mr. Hunter Man Owl arter de bright dest 'bout dat time. I tells yo' dey am dat!

## Jolly Parties for February

By Cousin Sally

I THINK when I look back on my little girlhood (and it is not so very far back, either) that the happiest and jolliest month of all the year for me was February. I can almost hear you say, "But, Cousin Sally, how about December and Christmas? Surely that was the happiest time of all the year, wasn't it?" I suppose you will think that I was a very strange little girl if I tell you no, that I loved February best. There was always so much to do in February, so many parties to give, so many celebrations and such good times to plan for. In December mother and father and all the grown-ups were far too busy getting things ready for Christmas to bother with us little people and so it was usually more or less of a dull month until the Great Day—Christmas—came.

But in February it was different and we had things our own way, with just as many parties and merry-makings as we wished. Almost every few days in February some great man has a birthday. To begin with, there are Washington and Lincoln, Dickens and Longfellow, Edison and Daniel Boone, and, oh! ever so many besides. We always celebrated these days. I remember one year in particular we celebrated Lincoln's and Washington's birthdays together on the 22d. There were just eight of us and we did have the jolliest of good times.

Ben made believe he was the "father of his country" and appeared all rigged up in an army suit of grandfather's that had been put away in the attic for years and years. Lulu was Martha Washington and a most entrancing little colonial dame she was, too, with her powdered hair piled high on the top of her head and dear little "beauty patches" of black court-plaster on her rosy cheeks. Tall, ungainly brother Bob was Abraham Lincoln and he did not look unlike the pictures that are in your histories. I was Mrs. Lincoln; little Harry was mischievous, lovable Tad, Frank and John were minute men, and Tom chose to be Major André.

For days and days we were busy fixing our "costumes" and getting everything ready. It was such fun to keep the secret all to ourselves and surprise folks. At last the 22d came and I cannot begin to tell you what

fun we had. Bob was so droll and kept us laughing all day. Of course he had read up a lot of Lincoln's jokes and sayings and anecdotes about him, and he told them in the most serious way. It was such fun to imagine Lincoln and Washington living at the same time. And to hear Lincoln talking about the war and then to listen to Washington give a thrilling account of how he crossed the Delaware—well, if you have a good imagination you will know how jolly it all was. We gave Major André a fair and square trial and sent him back to England to reform. We danced the minuet and finished the evening by sitting around the open fireplace cracking nuts, popping corn and telling stories.

If you boys and girls are looking for something different in the way of a party, why don't you give a Backwoods Party to celebrate Daniel Boone's birthday? Invite all your friends to come and wear the warmest clothes they have, for this is to be an outdoor party. When they have all come, take them out to the woods and build a regular, old-fashioned camp-fire. Then have games of "Throw the Hatchet," "Who Can Find the Indian" and "Scouting." If there is a pond near, you might have some good skating matches.

In "Throw the Hatchet," select a sturdy tree with a big trunk. Make a target on it, and then take turns throwing the hatchet at the target. The one who strikes nearest should win a prize, but of course this is not really necessary. "Who Can Find the Indian" is lots of fun. One boy is supposed to be a hostile Indian, who is lurking around spying on the "Settlers." The "Settlers" must all close their eyes while some one counts aloud one hundred. In the meantime, the "In-

dian" must take to his heels and make just as good time in getting to a hiding-place as he possibly can. The "Settler" who discovers the "Indian" wins the game, and is in turn the "Indian." I remember once we all hunted and hunted and hunted, and had almost given up hope of finding the "Indian" when we heard a loud "ker-choo" from a near-by tree and there up among the branches was our "Indian"—his sneeze betrayed him.

"Scouting" must be played when there is snow on the ground. The game is equally divided. There are just as many players on one side as on the other. If there are ten boys and girls, five will be "Scouts" and five "Indians." While the "Scouts" turn their backs and close their eyes, the "Indians" must stand in a row about two feet apart and start off on a quick run, all in the same direction. Their tracks may cross as many times as they choose. After a count of two hundred, the "Scouts" each start out to track down one of the "Indians." This is not always easy because the footprints have crossed and inter-crossed so many times. If two "Scouts" find they are on the track of the same "Indian," they must both go back to the starting-place, and begin all over again. As soon as an "Indian" is caught he becomes a "Scout" and must turn around and hunt the "Indians." It is a jolly, exciting game and I do hope you will try it. After the games are all played, gather around the camp-fire and roast potatoes. I am sure they will never have tasted so good to you before. At the Backwoods Parties we gave, we always brought the boys and girls back to the house to get good and warm before they started for home, and we usually had a candy pull.

I haven't said a word about our Valentine parties, but they were pretty much what yours will be. Gay, rollicking affairs with heaps of little love mottoes and candy hearts hidden everywhere about the house. Red and white crepe paper decorations all over, and the old-fashioned games. I do hope that this February will be the jolliest one you have ever spent, and I wish that you would write and tell me all about the good times you have.



## The Monthly Prize Contest

NOW, boys and girls, Cousin Sally wants every one of you to compete in this month's contest. Don't think you can't draw nor write. Try first, and try again, and then send me the very best work you can do. There is nothing like trying, and if you don't succeed the first time, perhaps you will the next. So, come, brace up, those of you who have tried and failed, and see if you can't win a prize this month. Cousin Sally wants to tell you beforehand that you will be sorry if you don't try for the prizes, because they are really exceptionally fine this time.

To the four boys and four girls, ranging in age from twelve to seventeen, sending in the best drawing of "The Old Mill-Pond," or "The Old School-House" or a "Pasture Scene," or verses on "The Robin's Song" or "The March Wind" or "April Again" we will give prizes as follows: Paints in Japaned tin, illustrated books, a post-card album, games, a sail-boat, paper dolls and a sewing-box. Besides these, there will be charming supplementary prizes to those whose work shows merit.

By the way, I am sure you will all be glad to know that Cousin Sally's Club is growing at a great rate.

If you are not already a member, you are not getting half the benefit you should from Our Young Folks' Department.

Send five cents for one of the club buttons, hear all about this new, very popular and most helpful club, and learn also the club motto.

### Hidden Cities

Below is a puzzle for younger folks who are under twelve years of age. To the boys and girls sending a correct list of these hidden cities, we will send prizes of beautiful pictures.

In each of the following sentences, a city of the United States is hidden. The first is Troy. Can you find the others?

1. For a little tot, Roy is an extremely bright boy.
2. It was after she had recovered from her illness that a comatose state set in.
3. Half a mile the other side of the bridge, Port Jackson is situated.
4. They had all assumed that the woman was very wealthy.

5. With great difficulty the hart forded the swollen waters of the stream.

6. The proceeds of the sale meant happiness to many poverty-stricken families.

7. It was sad that he had neither home nor folks to go to in his great trouble.

8. The confusion of his den verified the opinion that there had been a struggle.

9. John's laundry-work consisted of delivering the washing to near-by homes.

10. We thought every one knew arks were built in Noah's time.

11. We read in geography that the earth revolves around the sun.

12. "O, ma, have you some candy for me?" asked little Jane.

The contest closes March 10th. Write your name, age and address on the back of your drawings. Do not roll them, but send them flat. Also write your name, age and address when sending answers to puzzles. Address Cousin Sally, FARM AND FIRESIDE, 11 East 24th Street, New York City.



# The Housewife's Club

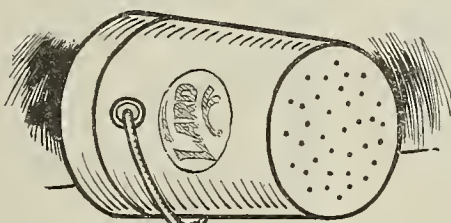
**EDITOR'S NOTE**—This department has been introduced for the special purpose of helping the women readers of Farm and Fireside in all problems pertaining to the household. Monthly we offer prizes as follows: Two dollars for the best description and rough sketch of an original, home-made household convenience or labor-saving device; \$1.00 for the second best; while 25 cents will be given for all household hints and recipes that can be used. This month's competition closes March 10th. Contributions must be written in ink, on one side of the paper, and must contain not more than 250 words. We would suggest that contributors retain copies of their manuscripts, as no contributions will be returned. Address "The Housewife's Club," care of Farm and Fireside, Springfield, Ohio.

## To Clear Muddy Water

**O**FTEN the water used on the farm as well as in the city is too muddy for use in the laundry. It may be cleared by putting a tablespoonful of powdered alum in each large tubful of water and letting it stand for a short time. This will make the water perfectly clear, but where soap is used it will require some washing-powder, as the alum makes the water hard. If for rinsing water it will not be necessary to "break" it. H. F. G., Missouri.

## Tea-Kettle Steamer

**A**LARD-PAIL may be converted into a tea-kettle steamer by punching the bottom of it full of holes. Two or three holes should also be punched in the cover as outlets for the steam. A smaller-sized pail or a coffee-can furnishes a suitable inner receptacle in which to steam puddings, small loaves of brown bread or any desired article of food. Dried pieces of bread or cake may be warmed over in this, but a saucer should be first placed in the bottom to prevent any crumbs from falling into the water. L. E. C., Connecticut.



Tea-Kettle Steamer

## Turpentine for Moths

**A**SMALL piece of paper or linen moistened with turpentine and put into the wardrobe or drawers for a single day, two or three times during the year, is a sufficient preservative from moths. Mrs. C. E. N., New Hampshire.

## About Feather Beds

**A**GOOD way to transfer feathers from one tick to another is to melt both ends off a tin can or syrup-bucket, rip both ticks just far enough to insert the can, then shake the feathers through the can from one tick to the other. Mrs. J. L. R., Ohio.

## Laundry Hint

Two tablespoonfuls of sweet milk added to the bluing water in which white clothes are rinsed will prevent any particles of blue from adhering to the clothes and causing a streak or spot of blue. Mrs. A. E. B., Iowa.

To preserve bacon, smoke it well; rub the surface of the bacon with powdered borax, wrap in paper and hang up in the store-room—not in the cellar. W. E. B., New York.

## Glove-Protector

**E**VERY one who carries a muff knows how quickly the lining becomes soiled sufficiently to ruin the freshness of white or light colored gloves. An interlining may be made of light wash silk and slipped inside the muff for special occasions when light gloves are a necessity. Measure the silk just the length of the muff lining and allow for a hem, making the piece somewhat longer than is necessary to go around the inner circumference of the muff, and sew together. Make circles of hat wire just large enough to fit into each muff-opening. Hem each end of the silk tube around one of these, holding it slightly full. When not in use the protector may be slipped into a handkerchief-box where it will be kept clean, and when it does begin to soil it can easily be washed. Mrs. M. Y. N., Illinois.

## Good Pudding

**C**REAM together one half cupful of butter, one cupful of sugar and the yolks of three eggs; add to this one quart of sweet milk, one pint of bread-crumbs and the grated rind of a lemon. Bake until done, then cover with a meringue made of the beaten whites of the eggs, half a cupful of sugar and the juice of the lemon. Place in the oven again until it browns a little.

## Good to Remember

A few drops of alcohol rubbed on the inside of lamp-chimneys will remove all trace of smoke when water alone is of no avail.

Instead of soaking tapioca before cooking, put it into boiling water or milk, and it will have less of the starchy flavor so noticeable when soaked in cold water.

## Ginger Drop-Cake

**O**NE cupful of light brown sugar, two thirds of a cupful of butter, one half cupful of cold water, one egg, two thirds of a cupful of molasses, one large tablespoonful of ginger, one large teaspoonful of soda and flour to make a thick batter. Drop by teaspoonfuls on a well-greased pan. Bake in a moderate oven. These are extremely nice if properly made. Mrs. J. P., New York.

## Useful Hints

When peeling onions, hold them under the faucet and turn the water on part way. By doing this they will not hurt the eye and will leave no scent on the hands. Mrs. J. M. F., Massachusetts.

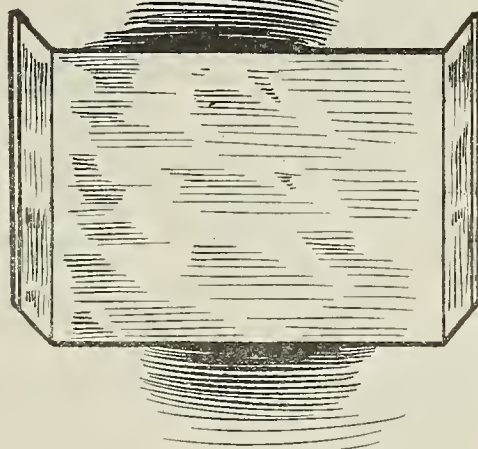
To restore the color to gilt frames, wash them with warm water in which onions have been boiled. Dry quickly with a soft cloth. F. D., Ohio.

If kerosene is bad and smokes the lamp-chimney, put a spoonful of salt in each lamp and notice how bright the light becomes. Mrs. I. M., Vermont.

Put a lump of sugar in the teapot and it will prevent tea staining any damask, however fine, over which it may have been spilled. Mrs. C. C. N., New Hampshire.

## Cooky-Baker

**I**WANT to tell the readers of the "Housewife's Club" how to make a cooky-baker. When once you have one you will wonder how you ever kept house without it. Procure from the hardware-store a piece of Russian sheet iron, of which dripping-pans are made, large enough to reach across your oven one way, and a few inches wider the other way. Turn up the extra length to make a side by which to handle it. This device is just the thing for baking cookies, drop-cakes, rolls and biscuits. Having no sides, the cookies may be easily slipped off, and it is so large that any number can be baked on it at once. This cooky-baker also makes a handy "tray" to carry things to and from the cellar. V. M., New York.



Cooky-Baker Made of Russian Sheet Iron

## Domestic Honey

**T**HREE pints of boiling water, six pounds of granulated sugar, a piece of alum (about the size of a soup-bean) which has been pulverized. Boil twenty minutes. Grate five quinces and two sour apples. Put this in boiling syrup and boil twenty minutes. It makes almost one gallon of honey, and in a gallon jar will keep the year through. H. R., Ohio.

## To Catch Mice

**A**DROP of oil of rhodium poured on bait in a common wire spring trap will be found very enticing to the mouse, and he will be caught easily. L. B., New York.

## To Start Hard Seed

**H**ARD seed, such as the Cyclamen, canna, moonflower and smilax, should be soaked in very hot, but not boiling, water three or four times the day they are to be planted. As soon as the first begins to cool, pour this off and put on fresh water and repeat three or four times. Unless this is done the seed will be months in germinating, and one month's time is required, even when well soaked. Some recommend filing the seed, but one is apt to file too deeply and destroy the germ. L. J., Kentucky.

## Cranberry-Sherbet

**A**DD one quart of water to one pint of washed and picked-over cranberries and let them boil briskly until the berries break. Rub through a sieve and measure. To three pints (add a little water if needed to make the required amount) put one pound of sugar and stir over the fire until the sugar is thoroughly dissolved. Take from the fire and stir well in one teaspoonful of granulated gelatin that has been soaked in half a cupful of cold water. Strain, and when cool freeze to a thick mush. Serve in sherbet-glasses after the meat course, never with it. M. F. S., Michigan.

## Canned Pumpkin

**C**OOK the pumpkin as dry as possible, then add a cupful of sugar for each cupful of pumpkin, and spices and salt to taste. Heat thoroughly and can. I always keep my potato-masher in the kettle to stir the pumpkin with. A pint can will make two pies. I have canned pumpkin this way three seasons and never lost a bit. It will keep much longer with the sugar and spices if not in cans. This method is easier than drying, and it is ready for pies by only adding eggs and milk. Mrs. C. E., New York.

## Noodle-Soup

**O**NE egg, pinch of salt, enough flour to mix stiff. Roll out in a thin sheet, cut in one-eighth-inch strips in uniform lengths. Have a quart of liquid, half milk and half water, boiling in a kettle. Add a small lump of butter, then drop in the noodles and cook twenty minutes with cover on. This soup is very nutritious. Mrs. T. T. W., Wisconsin.

## To Mend Rubbers

**T**HIN spots in rubbers can be mended at home by applying a cement made from five cents' worth of rubber dissolved in benzine or chloroform. First apply benzine for an inch or more around the hole and scrape until clean and until a new surface is exposed. Then apply the rubber with a brush, as quickly as possible so that it will not harden. Mrs. M. E. C., Missouri.

## Salve for Chapped Lips

**F**OR chapped lips, dissolve beeswax in a small quantity of sweet-oil by heating carefully. Apply this salve two or three times a day, and avoid wetting the lips as much as possible. E. I. L., Wisconsin.

[For the Housewife's Letter-Box See Page 39]

## HARD TO DROP But Many Drop It

A young Calif. wife talks about coffee:

"It was hard to drop Mocha and Java and give Postum a trial, but my nerves were so shattered that I was a nervous wreck and of course that means all kinds of ails."

"At first I thought bicycle riding caused it and I gave it up, but my condition remained unchanged. I did not want to acknowledge coffee caused the trouble for I was very fond of it. At that time a friend came to live with us, and I noticed that after he had been with us a week he would not drink his coffee any more. I asked him the reason. He replied, 'I have not had a headache since I left off drinking coffee, some months ago, till last week, when I began again, here at your table. I don't see how anyone can like coffee, anyway, after drinking Postum!'"

"I said nothing, but at once ordered a package of Postum. That was five months ago, and we have drank no coffee since, except on two occasions when we had company, and the result each time was that my husband could not sleep, but lay awake and tossed and talked half the night. We were convinced that coffee caused his suffering, so he returned to Postum, convinced that coffee was an enemy, instead of a friend, and he is troubled no more by insomnia."

"I, myself, have gained 8 pounds in weight, and my nerves have ceased to quiver. It seems so easy now to quit coffee that caused our aches and ails and take up Postum."

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



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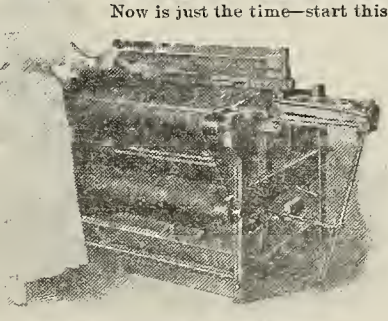
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Now is just the time—start this easy work at home in your spare time—you'll soon be wanting to run your loom all the time—for the very easy profits. I will tell you how you can make your time most profitable—how you can engage in a delightful and fascinating occupation in your own home, that will not interfere with your other duties and assure you big profits for as much or as little time as you may be able to devote to it. I promise that you'll be interested. I say, and I know that every word I say is true, that you can make more money and make it more easily by weaving on a Newcomb Automatic Loom than at any other kind of home employment. My 20 years' experience with others and their letters proves what you can do.

**THE NEWCOMB AUTOMATIC LOOM** is made especially for home workers. Unlike any other loom, it practically works itself. A simple movement of the hand is all it requires of the operator. No treading—no stooping—no shuttle throwing. Just the easy work that thousands of old and young are making big money at today—at home. No experience is necessary. You will be delighted with the ease with which you can make the finest and most durable carpets, rugs, mats, draperies of every kind, and even beautiful portieres, chenille curtains and hammocks. Bear in mind also, that no cash outlay for supplies is required. Old carpets, sacks, cast-off clothing and rags all furnish material for the loom. And the results you get with such material are simply wonderful. You can be sure when you own a Newcomb, that you will have more than enough work to keep you busy. Many of our customers make from \$25 to \$50 a week weaving with the Newcomb, and you can do likewise.

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W. B. STARK who will help you start a money-making business.

**NO EXPERIENCE NECESSARY** Let me send you some samples of the work you can do on a Newcomb Loom. The more you need the money the more I can and will help you to get started to making it.

**35 Taylor St., Davenport, Iowa.**



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**The Household**  
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**The 1910 Baby Calendar**  
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**The Missouri Valley Farmer** The great paper of the corn belt—is of interest especially to those in the greatest farm section of the world. Packed with practical information.

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**The Baby Calendar** is the most beautiful calendar ever made. It is an art masterpiece printed in many colors with no advertising of any sort. Every time you look at the handsome sleepy boy you are simply fascinated and want to yawn, too. The Baby Calendar is 11 inches wide and 17 inches long, printed on handsome de luxe paper. It is sent carefully packed, postage prepaid.

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**FARM AND FIRESIDE, Springfield, Ohio**

Tyne, and I am thankful fer the speech and the star, too. Bennie, honey, run all up and down the street and tell everybody Blossom is a heap better and they needn't git ready fer no funeral."

"Now, you know there ain't been a death on the bluff fer four years, since Mr. Si Bradford's ma died, and we was preparing to have as nice a funeral as ever was fer you, Miss Seliny Lue," said Mrs. Kinney in a tone that might have been construed as reproachful.

"Well, I wanter say one thing; and it's that I am glad me and Blossom have found out how many friends we have while we are still alive and can 'preciate them all. It never did seem jest right to hold back all the flowers and tears and white robes until people are gone where they can't enjoy 'em none. And specially about funeral sermons—looks like if the corpses could hear all the praise spoke over them they might get the ambition to go on living a spell longer. Lands alive, did you all know it's seven o'clock and not a breakfast dish washed on the bluff?"

Miss Selina Lue's call to duty sent them all hurrying in different directions.

Mrs. Dobbs was slow in getting started, and as she descended the steps she said: "I do declare I am uneasy about Ethel Maud. I couldn't find her nowhere this morning. I was jest so sorrowful about your trouble I clean forgot to worry."

"Oh, Mis' Dobbs, honey, when I opened the door this morning at daybreak there was Ethel Maud scrouched down on the steps with nothing on but her nightgown, and a-moaning like something hurt. She shot past me into the room, and when she seen Blossom so much better she jest laid down on the floor and cried herself to sleep plumb pitiful. Mr. Alan lifted her on the foot of the bed, and I know if Blossom stirs she will wake up and call me. Her little heart is that loving she can watch even while she sleeps. I feel this morning more than ever how we are all watched over in loving kindness that never sleeps and He ain't ever going to forgit a single one of us. Ain't it a blessed thought, and perfecting and comforting in times of trouble?"

"That's true, Miss Seliny Lue," answered Mrs. Dobbs thoughtfully. "And we all oughter be mighty happy with so much good being done to us."

"And ain't we? Why, I jest butters my bread of life with happiness. Look like some folks likes ter swoller they bread dry, but you and me want a little sprinkle of happy-sugar a-top of our'n. How's Mr. Dobbs a-holding out?"

"He ain't cussed a word since our trip, Miss Seliny Lue. Sometimes I sees him jest a-chawing the swears and—"

"Don't notice it, Mary Ellen. Jest hold to the thought that he aint a-going ter do it no more, and that'll help—"

"But look yonder, Miss Seliny Lue. Ain't—that—cute?" And Mrs. Dobbs turned Miss Selina Lue around bodily.

It was Carrots standing in the grocery door. He was crowing and gurgling and wobbling, but he stood his ground determinedly—alone. One flaming lock at the back of his head rose straight up with excitement, and he stretched his hand and ducked his head to Miss Selina Lue in evident triumph over his achievement.

"Honey, I jest can't a-bear to look. A mother oughter be the one ter see her baby take his first steps, and poor Mis' Flarity is—" Miss Selina Lue faltered as she started toward the tottering baby.

"Pick him up quick," answered Mrs. Dobbs. "They ain't nobody in the world got a better right to any baby's first steps than you has, Miss Seliny Lue."

[TO BE CONTINUED]

## Miss Selina Lue and the Soap-Box Babies

[CONTINUED FROM PAGE 30]

with her preparations for the day, and as she worked she smiled to herself and lightly brushed her fingers over the cheek that had felt the twofold kiss.

Soon, however, her pleasant thoughts were interrupted by the apparition of Mrs. Kinney at the door. Miss Selina Lue regarded her with astonishment. She was enveloped in the folds of an old black shawl and in her hand she carried a large cross of white tissue-paper roses.

The expression on her face was one of sympathy and chastened sorrow.

"Miss Seliny Lue," she said in a correctly funeral voice, "I come over as soon as I could. It took almost all night to git roses enough made to fix a design fer everybody. We all wanted a fitten expression of our sympathy."

"Why, Mis' Kinney, honey, I don't need no sympathy on 'count of—"

"Well, of course she wasn't your own child, and so you can't feel the same as a mother, but a death in the family is always sad, though sometimes a great relief. You seemed so fond of—"

"Oh, Mis' Kinney, honey, stop before you go any farther and let me tell you Blossom ain't dead, but gitting well by the

Lord's mercy. Still, I do thank you fer your kind feelings and—"

"Well, I wish I coulder knowed she wasn't a-going to die before I set up all night and wasted the tissue paper. I woulder rather made— There come the Dobbses now! Won't they be surprised! Mary Ellen have got her wreath done, but it looks kinder wobbly."

Mr. Dobbs had put his black Sunday coat on over his overalls, and on his way to work was stopping for a visit of condolence.

Mrs. Dobbs had on a black muslin skirt and waist, and had tied a piece of that same material on the arm of Bennie, whose eyes were swollen with crying and whose appearance denoted real heart anguish.

"Oh, Miss Seliny Lue, me and Dobbs come to say—we— Speak up, Dobbs!" Mrs. Dobbs' voice broke and her chubby face began to work with grief.

"All you've got to say, Mr. Dobbs, is how glad you are that my baby is gitting well, and then give your coat to Mary Ellen and go on to your work, rejoicing fer me," said Miss Selina Lue, coming quickly to the rescue of the floundering condoler. "How did you all ever git the notion that

things went against Blossom last night?" she asked.

"We seen the doctor—and then you closed the front blinds—that's always a sign—and—" answered Mrs. Dobbs, swallowing a sob.

"Well, ain't that too bad fer you all to be so upst about a mistake! And if here ain't all the Tynesses! Mercy, Mis' Tyne, Blossom ain't dead nor likely to be, and, please, ma'am, take them black bombazine strips offen the children's necks. It's so rough it'll rub 'em raw."

Now, Mrs. Tyne was a person of one idea at a time, and her mind was set on a speech to go with the bias-looking star she tendered Miss Selina Lue, so out it came, regardless of the fact that it was not at all needed.

"Miss Seliny Lue," she said with real and practised emotion, "though she have gone from our sight and we must bury her in the c-o-l-d, col-d ground, yet let us look up!" At the word "cold" Mrs. Tyne gave a realistic shiver, and at the word "up" she cast her eyes skyward, though the expression was in some degree marred by a squint caused by the rays of the morning sun striking her full in the face.

"That's a real comforting thought, Mis'

## If You Want a Kiss, Take It

There's a jolly Saxon proverb

That is pretty much like this,

That a man is half in heaven

When he has a woman's kiss.

But there's danger in delaying—

And the sweetness may forsake it,

So I tell you, bashful lover,

If you want a kiss, why, take it.

Never let another fellow

Steal a march on you in this,

Never let a laughing maiden

See you spoiling for a kiss;

There's a royal way to kissing,

And the jolly ones who make it

Have a motto that is winning:

If you want a kiss, why, take it.

Any fool may face a cannon!

Anybody wear a crown,

But a man must win a woman

If he'd have her for his own:

Would you have the golden apple,

You must find the tree and shake it,

If the thing is worth having,

And you want the kiss, why, take it.

Who would burn upon a desert,

With a forest smiling by?

Who would give his sunny summer

For a bleak and wintry sky?

O! I tell you there is magic!

And you cannot, cannot break it.

For the sweetest part of loving

Is to want a kiss, and take it.



# The Mystery of Hillcrest

[CONTINUED FROM PAGE 28]

"Arrest that man, Dr. Ralph Buell," called Forbes. "I charge him with complicity in the attempted murder of Kato and, also, in keeping Mrs. Sturges a prisoner here in his power to obtain possession of her fortune."

"Where are you going?"

The sharp, clear tones of the doctor made him pause on the threshold of the library.

"I am going to clear out the tower rooms."

"You will die if you attempt to force an entrance there, Forbes."

"Will I?" laughed Forbes. "Then, you shall go ahead and open the door for me. Force him up the stairs, men."

As they opened the door leading to the large entrance hall a subtle odor swept over them. It was smoke, delicate, impalpable, but unmistakably smoke. With a quick exclamation the doctor wrenched his arm away from that of the man who acted as butler in disguise and dashed up the staircase, Forbes following with the two detectives at his heels.

At the second floor the smoke was thicker. Buell called back to Nan as he ran: "Rouse the servants, Nan! Push those electric-buttons at your right hand, all of them. Look out for Mrs. Sturges and Arline!"

Nan obeyed mechanically. Mrs. Daggett and Villette were already aroused, and the housekeeper was busy wrapping blankets around the unconscious form of Mrs. Sturges when Nan entered the room. Villette already had Arline in her arms.

As they left the rooms and reached the main hallway Nan saw a sight she never forgot. The doctor had reached the upper door first. Forbes had pushed up after him, and the two had struggled there on the landing before the entrance to the tower. Suddenly the doctor gave the other's wrist a peculiar wrench and half turning his body over, he threw him down the narrow staircase. Smoke was pouring out of the door cracks, and as he opened it the great waves poured out, almost overpowering him. Forbes managed to half raise himself, and pointed a shaking finger at the doctor.

"Get that man," he shouted. "Get him if you shoot him dead. I charge him with abetting the murder of Kato. Get that Hindoo, Tunga Din. He is the murderer of my partner, Willard Sturges!"

But even as he yelled the words, a figure emerged from that dense pall of smoke and stood for an instant at the head of the staircase. Beside it was Tunga Din, supporting the man at his side. And at sight of that pale face, with its deep-set eyes, its haggard handsome face and dark curling hair, Forbes gave a groan of utter amazement.

"Great God!" he gasped thickly. "The ghost of Willard Sturges."

One month later the "Eloise," Willard Sturges' splendid private yacht, steamed out of New York harbor for an extended sail around the world. On board, beside his wife and little girl, were Tunga Din, his devoted body-servant, and Dr. Ralph Buell and his bride, Nan Calvert.

Nan stood beside Mrs. Sturges, watching the last glimpse of Manhattan vanish as they slipped past the fort guns in the Narrows.

"I think it is all so wonderful," Nan was saying for the thousandth time, almost, since that last terrible night at Hillcrest. "Did you never despair of his recovery?"

"Many, many times," said Eloise simply. "It was the courage of Tunga Din and Doctor Buell that buoyed me up. If Peter Forbes had guessed for one moment that my poor boy was insane, he would have hounded me to death, had him placed in a private sanatorium for life, where he could have absolute power over him. It was our only hope. He had been accidentally poisoned while hunting in the jungle of India. Tunga says he accidentally ate the berries of a root the natives claim brings on madness. For months he struggled with a slow, dangerous fever, and when he grew better he was subject to strange fitful attacks of insanity. He would try to kill even Tunga and me at those times. Tunga only could keep him quiet. The incense soothed him, and the strange low incantations at the little shrine he loved. But when he found Kato hidden behind the draperies he lifted him bodily and threw him from the window before Tunga could stop him."

"And that last night, while I was watching Tunga and him at the little shrine, he suddenly seized one of the sacrificial knives that hung on the wall and struck at me, crying out that I was Maya the goddess and he must release me from the prison of flesh. Oh, it was all so terrible."

"And the shock of the fire brought back his reason?" Nan was watching the tall, well-set figure of Willard Sturges in his yachting suit and cap, as he leaned over the rail beside the doctor and watched the shore of Long Island with its myriads of lights just beginning to glow through the violet shadows of the twilight.

"He doesn't appear very dangerous now, does he?" laughed Mrs. Sturges happily.

"But were you never afraid at Hillcrest?" Nan mused. "I think it is a miracle of love."

"Love conquers fear, dear," said Eloise Sturges gently. "It is the greatest gift we bear to those we love, we wives, Nan, that perfect love casteth out fear."

THE END

## The Housewife's Letter-Box

We shall be very glad to have our readers answer any of the questions asked, also to hear from any one desiring information on household matters. There is no payment made for contributions to this column. Address the "Housewife's Letter-Box," Farm and Fireside, Springfield, Ohio.

### Questions Asked

When making chocolate-cake the frosting always comes out so dull. Can some one tell me how to make it shiny?

A SUBSCRIBER, Wisconsin.

Will some one tell me how to cure dried beef so that it will keep all summer?

MRS. C. G., New York.

### Questions Answered

ORANGE MARMALADE, for S. E. P., Texas—Select sour, smooth-skinned oranges. Weigh oranges and allow three fourths their weight in cut sugar. Remove peel from oranges in quarters. Cook peel until soft in enough boiling water to cover; drain, remove white part from peel by scraping it with a spoon. Cut thin yellow rind in strips, using a pair of scissors. This is more quickly accomplished by cutting through two or three pieces at a time. Divide oranges in sections, remove seeds and tough part of the skin. Put into a preserving-kettle and heat to boiling-point, add sugar gradually and cook slowly one hour; add rind and cook one hour longer. Turn into glasses. M. E. W., Alabama.

MRS. A. Z., Ohio—Perhaps you are too generous with your shortening. I have had cakes fall when I used granulated sugar. When recipes call for a cupful of granulated sugar, I do not use over three fourths of a cupful for cakes.

MRS. V. K. F., New York.

For Mrs. J. A. F., of Louisiana—This is my way of making scrapple. Cook the hog's head until tender; remove from the bone; let stand until cold, then chop fine. Strain the water in which the meat was boiled, and let stand until cold; then re-

move the fat. Also press the grease from the chopped meat. Place the broth back in the kettle, season with salt, pepper and sage to taste; then add the chopped meat and more water if needed. Thicken with corn-meal like mush, cook thoroughly. Put in molds, and when wanted slice and fry brown. Mrs. W. E. B., New York.

D. S., Kansas—I would suggest that you take your white plumes to a cleaner. This is the safest way, and the results are sure to be satisfactory. EDITOR.

CANNED SWEET POTATOES, for Reader, Kansas—Pare the potatoes and cut them in size desired. To every quart of potatoes add one cupful of sugar and enough water to cover. Cook until almost done. If the water has cooked out add more to completely cover. Can and seal.

MRS. J. A. R., Kentucky.

For Mrs. J. W. H., Maryland—The main causes of your trouble with the "butter not coming" are:

1st. Churning only once a week. It is almost impossible under ordinary household conditions to keep cream properly in fit condition for churning easily and making good butter if kept so long. The bitterness you complain of is due to the development of certain bacteria in the cream. Another kind of bacteria produces "ropy" milk, and so on. However, be sure that none of the soft corn you feed to the cow is moldy or spoiled.

2d. The cream does not separate readily from the milk of cows far along in the period of lactation. This difficulty can be overcome by adding to each gallon of fresh milk after it has been strained about one and a half pints of pure warm water. Of course, this will thin the skim-milk somewhat and make it less desirable for table use, but it will assist very much in overcoming the troubles you complain of, saving time, labor and bother.

In summer cream should be churned every other day, at least; in winter, two or three times a week. EDITOR.

## How to Buy Soda Crackers in the Country

Next time you go to the store buy enough Uneeda Biscuit to last till next market day. "But," you say, "will they keep that long?"

Yes—

## Uneeda Biscuit

are the soda crackers that come to you protected in sealed packages, so that you *always* have fresh soda crackers no matter how many you buy or how long you keep them.

5¢

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## When Were You Born?

12 Post-Cards Without Cost



12 Birthstone and Flower Post-Cards

Would you like to have these twelve beautiful post-cards (one for every month)? Each depicts in many colors the special jewel and the flower to be worn by every person born in that month. Each month's post-card also shows the special meaning and sentiment that is given to the jewel and the flower of that month. For instance—the January post-card depicts in gorgeous colors a beautiful Garnet set in a brooch, which signifies "Constancy." The January post-card also depicts a cluster of glorious Purple and Gold Pansies, which means "Thoughts of You." There are twelve post-cards in the complete set, one for each month.

In Twelve Colors

These are the most beautiful, unique and interesting post-cards ever made. Learn the mysteries of the natal month of yourself and your friends. Every post-card is printed in twelve colors on a silver back-ground. Send these cards to friends in their birth months. They are simply great—words cannot tell their beauty. You must see them yourself, and you can get them without cost.

### How to Get Them

We will send you these twelve beautiful post-cards without cost if you will send us ten cents (silver or stamps) for three months' trial subscription to FARM AND FIRESIDE. Our only requirement is that the subscription must be for some one who is not now a regular subscriber. Send FARM AND FIRESIDE to a friend for three months. This is a great offer from the greatest farm paper. Send for them to-day. Use the coupon opposite or pin it to your letter. Address,

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Gentlemen:—  
Please send me the Birthstone and Flower Post-Cards, postage prepaid, without cost to me. Enter as a new subscriber for three months the name below mine, for which I inclose ten cents (silver or stamps).



# Unique Success of the Burpee Business in "Quality Seeds"

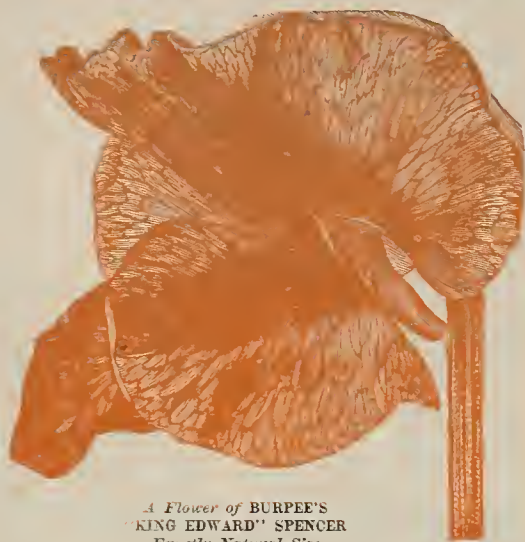
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THE BURPEE-STANDARD IN SEEDS is the highest it is possible to attain to-day. Progressive planters know that "the Best is the cheapest." These two sentences convey the principal reasons why the Burpee Business grows year by year.

For 1910

we have decided to give planters generally (even those not accustomed to buy High-Priced Novelties)—an opportunity to learn of the great advancement recently made in several new Vegetables and Flowers—at less than half our regular Catalog Prices for 1910!

Any "Four of Finest" Novelties for 1910—  
Your Choice—Mailed for only 25 Cents!



A Flower of BURPEE'S  
"KING EDWARD" SPENCER  
Exactly Natural Size.



"THE SEAL OF  
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## Burpee's Six New "SPENCER" Sweet Peas

In Six Separate Packets

ALL FOR 25 CENTS!

These six are of the Choicest Re-selected Strains,—all true to type, and of such quality as has not been possible to obtain before at any price!

For 25 Cts. we will mail one regular packet each of BURPEE'S KING EDWARD SPENCER, the largest and best of all crimson-scarlet Sweet Peas; OTHELLO SPENCER, the first gigantic rich maroon; ASTA OHN, the large lovely waved true lavender Spencer; BURPEE'S WHITE SPENCER, largest and most beautiful of all whites; HELEN LEWIS, a glowing crimson-orange, and our re-selected pink, COUNTESS SPENCER, the parent of all this new race of "Truly Gigantic," ruffled, Orchid-flowered Sweet Peas.

These six superb Spencers, together with our new Leaflet on culture, mailed for only 25 cts., five collections for \$1.00, and mailed to separate addresses if so ordered.

Even at our reduced prices for 1910, if purchased separately, these six packets of NEW "SPENCERS" would cost sixty cents.

## The Leading American Seed Catalog for 1910!

AN ELEGANT BOOK OF 178 PAGES,—it is "THE SILENT SALESMAN" of the World's Largest Mail-Order Seed Trade. It tells the plain truth about the Best Seeds that can be grown,—as proved at our famous FORDHOOK FARMS,—the largest, most complete Trial Grounds in America. Handsomely bound with covers lithographed in nine colors, it shows, with the six colored plates, Nine Novelties and Specialties in unequalled Vegetables, and five finest Beautiful New Flowers, including two superb "Gold Medal" Spencer Sweet Peas.

With hundreds of illustrations from photographs and carefully written descriptions it is a SAFE GUIDE to success in the garden and should be consulted by every one who plants seeds, whether for pleasure or profit. While too costly a book to send unsolicited (except to our regular customers), we are pleased to mail it FREE to every one who has a garden and personally writes for it. Shall we mail you a copy? If so,—write To-day!

Portion of a Spill of the  
NEW EARLIEST CATAWBA CORN.  
Enlarged from a Photograph.



Separately the thirteen varieties named below each cost (excepting Fordhook Melon) 15 cts. per pkt.,—but you can select any four varieties for 25 cts. (silver or stamps), while we will mail any nine varieties for 50 cts., or all thirteen for 75 cts. Separately these thirteen at prices "per pkt.," amount to \$1.90.

**Burpee's "Giant-Podded" Pole Lima.** An entirely new and most remarkable Variety, now first offered for advance trials in connection with \$427.50 in cash Prizes,—we will pay \$100 for a suitable name! It is the largest podded, largest seeded and most productive of all Limas!—For Colored Plate, photographs, History, and description, etc.,—see Burpee's New Annual for 1910. Per pkt. 15 cts.; ¼ pint 35 cts.; per pint \$1.00, postpaid.

**Burpee's Nameless Bush Bean.** This is also quite unique and we will pay \$100 for a suitable Name,—also other liberal cash prizes for 1910. It is the "Best of All,"—superior to Burpee's Stringless Green-Pod and is White-seeded. For illustrations from photographs and full particulars—see Burpee's Annual for 1910. Seed very scarce. Per pkt. (only 30 Beans) 15 cts.

**Burpee-Improved Bush Lima.** The pods, truly enormous in size, are borne early and abundantly on vigorous upright bushes. Per pkt. (two ounces) 15 cts.; ½ pint 25 cts.; pint 45 cts., postpaid.

**Fordhook Bush Lima.** The only stiffly erect Bush form of the popular "Potato" Lima. Both pods and beans are twice the size of the Kumerle, while the "fat" beans are of the same delicious flavor as Burpee's Bush Lima. Per pkt. 15 cts.; ½ pint 25 cts.; pint 40 cts.

**Earliest Catawba Sweet Corn.** A real rival to our famous Golden Bantam,—both in extreme earliness and surpassingly delicious flavor. Some planters say it is even better than Bantam! For illustrations, description and "reports,"—see Burpee's Annual for 1910. Per pkt. 15 cts.; ½ pint 30 cts.; per pint 50 cts., postpaid.

**Burpee's "Wayahead" Lettuce.** So named because it is the earliest, most solid and surest-heading of all early "Butterhead" Lettuces. Per pkt. 15 cts.; oz. 45 cts.

**Fordhook Musk Melon.** Heavily netted melons, with thick golden-red flesh of exquisite flavor. A better shipper than our original Netted Gem,—The "Rocky Ford" Melon,—and as sweet as our famous Emerald Gem! Per pkt. 10 cts.; oz. 30 cts.

**Burpee's "Dwarf-Giant" Tomato.** The flesh is so firm and the tomatoes so heavy that they might be described "solid as a rock!" It is the most nearly seedless of all tomatoes. Of handsome dwarf, erect growth, the bushes produce enormous crops of the most beautiful tomatoes which are truly gigantic in size and absolutely unequalled in delicious flavor. Per pkt. 15 cts.; ¼ oz. 40 cts.; per oz. \$1.50.

**African "Golden-Orange" Daisy.** (Dimorphotheca Aurantiaca.) As easily grown as any common annual,—this is entirely unique in color and most strikingly beautiful! It has created a sensation wherever seen and you can get some idea of its rare beauty from the colored plate in Burpee's Annual for 1910. Per pkt. 15 cts.

**New Giant-Flowered Mignonettes.** Burpee's Special Blend Goliah, Gray, Red and White Giants,—each bearing great massive spikes of delicious fragrance,—never before equaled. Per pkt. 15 cts.

**"Variegated-Queen" Nasturtiums** in Superb Mixture for 1910. Of tall growth, bearing flowers of many bright colors. The leaves are so beautifully variegated with yellow, white and green that the plants would be worthy of culture even for foliage alone. Per pkt. 15 cts.; per oz. 35 cts.

**Best Giant-Flowered Pansies.** As now improved for 1910, this Burpee-Blend is the best and most complete mixture of Truly Giant-flowered Pansies ever offered. Per pkt. 15 cts.

**New "Spencer" Sweet Peas.** Many colors of the gigantic waved and frilled "Spencers"—in unequalled mixture. These new seedlings of the true "orchid-flowered" crinkled type will give a rare treat to lovers of Sweet Peas. Per pkt. 15 cts.; per oz. 45 cts.; ¼ lb. \$1.25.

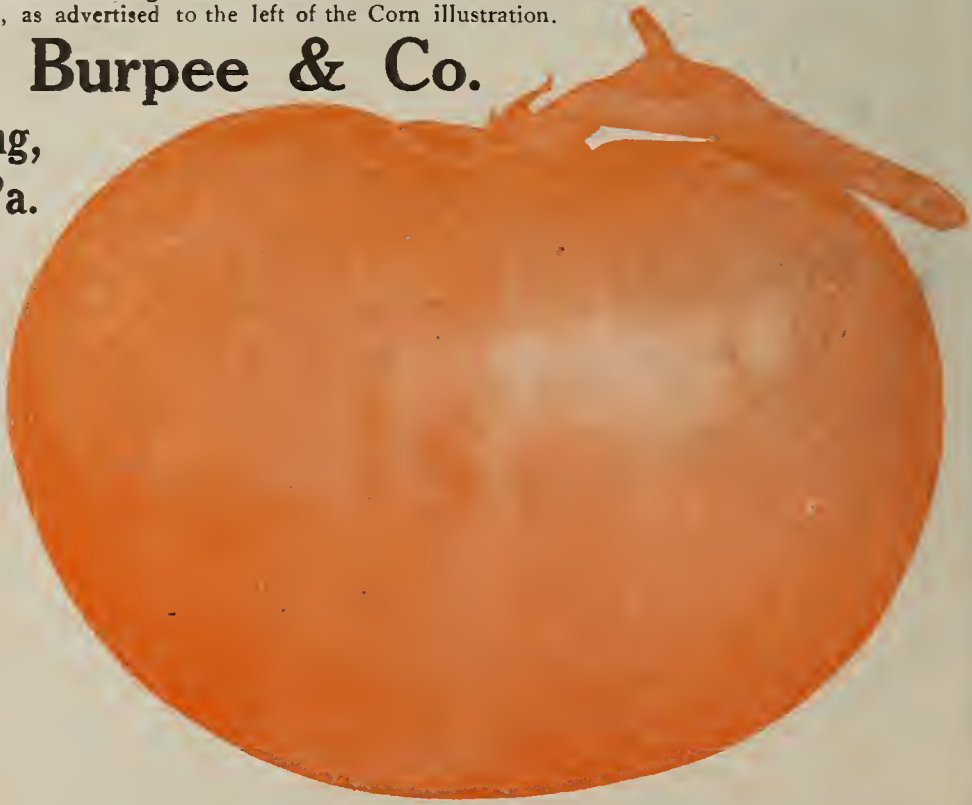
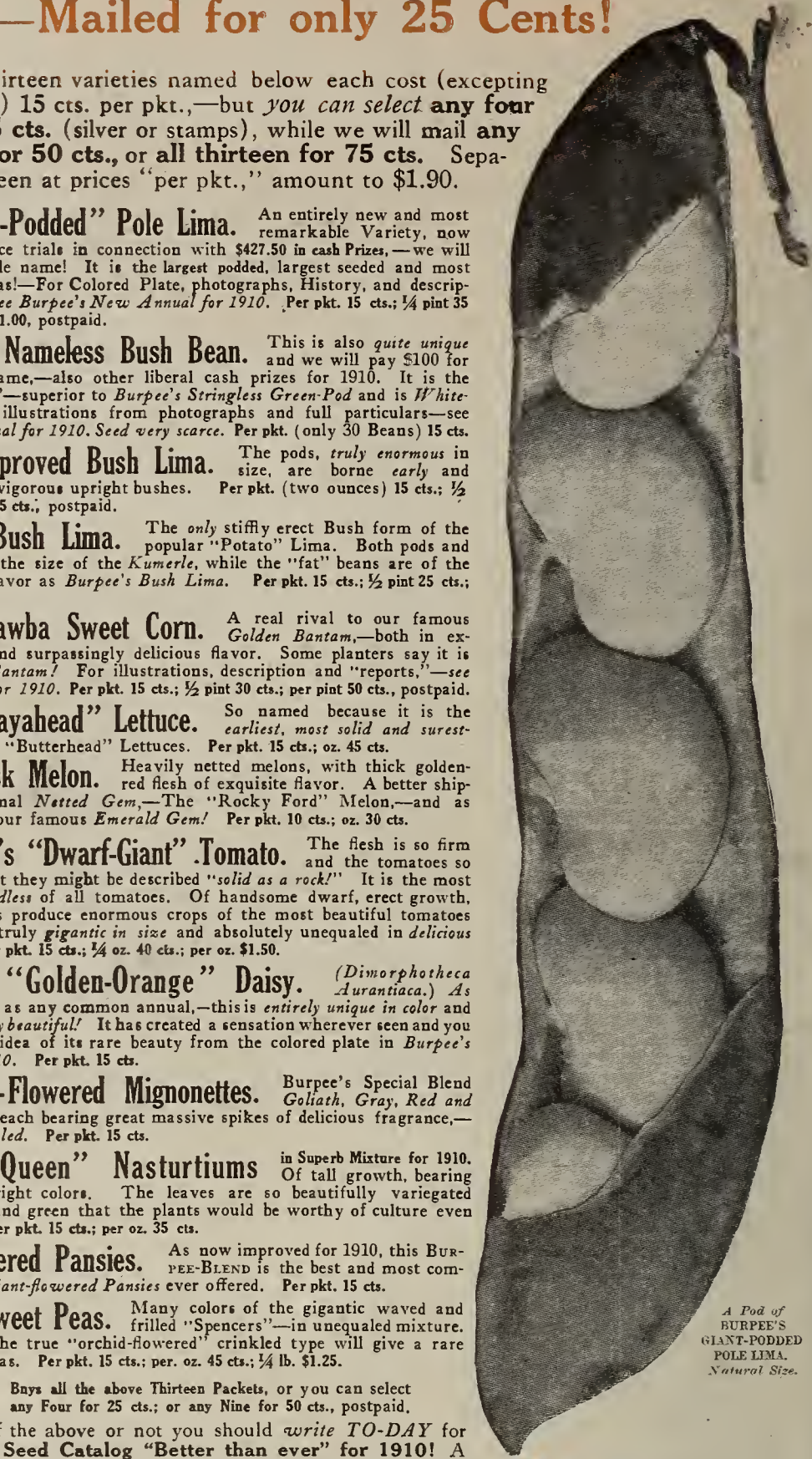
75 Cents

Buy all the above Thirteen Packets, or you can select any Four for 25 cts.; or any Nine for 50 cts., postpaid.

Whether you order any of the above or not you should write TO-DAY for The Leading American Seed Catalog "Better than ever" for 1910! A bright book of 178 pages, as advertised to the left of the Corn illustration.

**W. Atlee Burpee & Co.**  
Burpee Building,  
Philadelphia, Pa.

A Pod of  
BURPEE'S  
GIANT-PODDED  
POLE LIMA.  
Natural Size.



Natural Size "DWARF-GIANT," as grown at Fordhook; weight, 17 ozs.

Should you forget our full address and want to order at any time remember it is sufficient to write

**BURPEE, PHILADELPHIA**

THE FACT that the Burpee business is a record of continuous yearly growth is almost as much in evidence as the truth of the firm's famous motto that "Burpee's Seeds Grow." And who can place a limit to the growth of the Burpee business so long as its inspiring aim continues to be that of its founder—"Never to attempt to compete merely in price but aim always to supply only the best seed it is possible to produce." Value for value must finally obtain in all transactions of successful business, and one reason why W. Atlee Burpee & Co. have had for many years the largest mail-order seed trade in the world is doubtless because they have always made QUALITY their first consideration. Even in "lean years," when business barely paid expenses, they have steadily resisted the temptation to cut down the cost of production when such reduction would mean a cheapening in quality. They have always appreciated the truth of the time-worn idiom, that in seeds, at least for the planter, "the best is the cheapest."—From The Florists' Exchange, New York, June 5, 1909.



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# FARM AND FIRESIDE

THE NATIONAL FARM PAPER

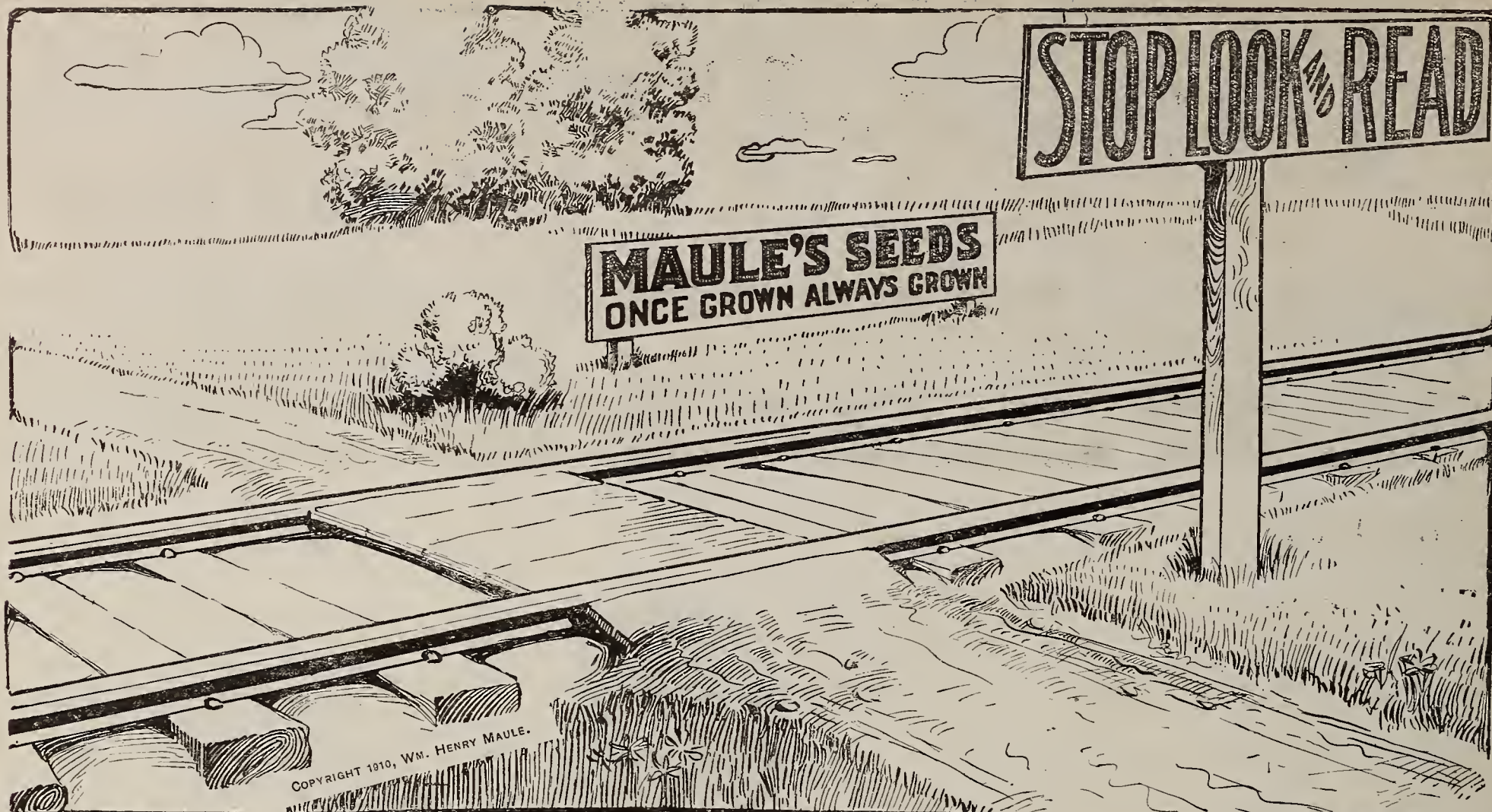


ESTABLISHED  
1877

FEBRUARY 25  
1910







# Maule's Seeds

## Once Grown Always Grown

Few gardeners have any idea of the size of the Maule Seed business. To one firm of celery growers I have sold in the last five years over 1,000 pounds of my XX Golden Self-Blanching Celery seed; this year I have already shipped them 200 pounds for their own planting. To another gardener I shipped last year \$550 worth of Maule's Prize Earliest Cauliflower; this year I am getting \$100 per pound for this seed. In one county in New York last season I sold almost 1,000 pounds of my selected Danish Ballhead Cabbage. One of my customers last year cleared up \$3,375 net on 15 acres of Maule's Earliest Valentine Beans; another made \$9,000 net profit on a 50-acre field of White Bush Squash; another, on 300 acres on an Island in the San Joaquin River, in California, made a net profit of \$92,000 on Maule's XX Golden Self-Blanching Celery. In the small town of Sunnyside, Wash. I shipped last year, direct to growers 110 pounds of Maule's Earliest of All Tomato seed, while in a small town in Texas, with a population of 25, more than \$3,000 worth of Maule's Seeds are annually consumed.

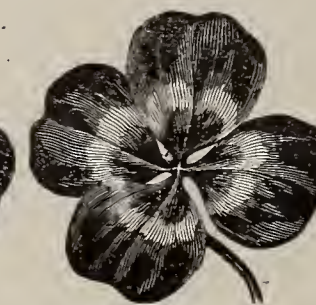
**I will be glad to send my Seed Book for 1910 to every reader of Farm and Fireside who will send me their address on a postal.**

Other facts are that in the last five years I have paid the U. S. Government \$214,898.07 in cash for postage. For years I have received more registered letters at the Philadelphia Post Office than any other Philadelphia seed house. In my home State of Pennsylvania alone I have 67,801 customers, fully 15,000 more than any other seed house in the country. During the late Boer War more cases of Maule's Seeds, bound for the Transvaal, were held up by the British Army than of any other seedsman, whether French, German, English or American. These facts may prove of interest to readers of the Farm and Fireside who do not know Maule. Maule's Seeds have today a reputation surpassed by none, equaled by few, and as you can get

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**WM. HENRY MAULE**  
**1713 Filbert Street Philadelphia, Pa.**







Vol. XXXIII. No. 10

Springfield, Ohio, February 25, 1910

PUBLISHED  
SEMI-MONTHLY

## The Agriculture of Three Ancient Nations

### Part II.—The Maintenance of Humus and Soil Nitrogen—By Prof. F. H. King

WHERE such dense populations have been maintained during so many centuries, largely from products of the soil, as has been the case in China, Korea and Japan, we need not be surprised to find that these people learned long ago both the great importance of humus, of the right quality and quantity in the soil, and possible methods of maintaining them. Neither need we be surprised that they also solved their problems of maintaining both the humus and the soil nitrogen in sufficient amount for good yields.

Indeed, their solutions have been so complete and they practise their methods so well that during all our travels we saw less indications of deficient nitrogen in the soil and of intense plant hunger than one would see during a single day traveling almost anywhere in this country east of the Mississippi. One of the features so different from what we are accustomed to see in this country, and which was continually forcing itself upon our attention, was the remarkable uniformity of growth and of plant vigor in all parts of a field. There the inequality of color and of height of plants so characteristic of fields here was quite absent. One man's field might differ from his neighbor's, but uniformity of growth up to his standard almost invariably prevailed. It was only when we were nearing Mukden, where the holdings are larger and where the population is less dense, that we saw the first strongly spotted fields with plants markedly yellow, showing nitrogen starvation.

#### How a Chinese Family Farms

While we may never adopt the details of any of the methods of these people, it is well worth our while to study carefully some of those they have practised so long and found eminently satisfactory under their conditions, because of the fundamental principles involved, and because they may suggest modifications of some of our practices or adaptations of theirs which may be helpful to us. We propose to describe in some detail what we saw being put in practice very generally in the Kiangsu and Chekiang provinces to maintain the humus and nitrogen content of the soils in their little fields. The photographs used in making the composite illustration on this page were all taken at the same place on May 28th, and the same straw-thatched pumping station is seen in three of the views which represent several phases of the work of a single household.

Under the shelter a cow is working a wooden chain pump, raising water from the canal to flood the field where the man with the other cow is plowing and where still another man is spreading manure with his hands, picking it in pieces to scatter it evenly over the surface. On the bull-wheel of the pump sits a girl of fourteen years holding a baby in her lap and riding with her is another little girl of seven or eight. It is their duty to care for the baby and keep the cow at work. The water flowing over the field has softened the ground so that the cow drawing the plow sinks to her knees. The pumping will continue until the surface of the field is nearly covered. They are fitting it for a crop of rice, the plants for which are now eight to ten inches high in a well-cared-for nursery ready for transplanting.

From this field there has just been removed a crop of rape, some of which, on an adjacent strip, is seen lying in rows where it grew, but now pulled up by the roots and being carried by two men to the village where the women are thrashing out the seed and tying the stems in bundles, carefully stacking them away to serve as part of the family fuel or to be sold to others for the same purpose. The rape-seed will have the oil expressed from it to sell as a money crop, while the rape-seed cake and the ashes from the stems will go back on the land as fertilizers. By this treatment of the crop they are returning to the land practically everything it has taken from the soil except the nitrogen in the stems, for the oil is in composition like butter, largely made up of hydrogen and carbon derived from the air as water and carbon dioxide.

A good crop of rape yields a thousand pounds of seed per acre, which sells at \$1.30 per hundred, or \$13 per acre. Some forty per cent of the seed is oil,

and the cake is worth fifty-four cents per hundred pounds. So when the farmer buys back his cake for fertilizing, he pays at the rate of \$3.23 per acre for it and has left \$9.77 cash, besides his fuel and ashes. The stems have a market value of ten cents per hundred, and the yield of fuel is fifteen hundred pounds per acre. If he sells the fuel, he will buy ashes and human-manure or in some other way make good the loss to the land. The winter crop of rape, harvested the last of May, thus brings \$9.77 per acre cash and \$3.23 per acre for fertilizer, besides contributing fifteen hundred pounds of fuel, with its ashes. In early spring, too, when the rape-plants are small and tender, the tips are

ty days before and stacked with soft mud dipped from the bottom of the canal and allowed to ferment. Two men were bringing this compost from the canal back to the field, one of whom is seen with his two basket-loads swinging from his shoulder, while another man is busy spreading it with his hands over another portion of the same field where the man and the cow are at work plowing, and over which the girl and her cow are pumping water.

This vetch is sowed just before or just after the rice crop is harvested and grows through the balance of the year until it comes into full bloom early in May. It is then cut and carried to the banks of the canal green, where it is stacked in layers, each of which is saturated with the canal mud collected in the manner illustrated on the next page, where the boat has received nearly its full load. Across the canal from the boat being loaded with the mud one of the green compost stacks is being made and it is there this boat-load of mud will go.

This legume makes a heavy growth equal to that of red clover, and the field when in full bloom is far more beautiful, for the large, light rose-pink flowers, resembling huge white clover-blossoms, but of a bright pink, stand above the leaves, giving to the field an almost solid color. One acre of this vetch is commonly applied to three or four acres of rice, giving one and a half to five tons of the green produce and as much more soft canal mud per acre, or a dressing of three to ten tons, all carried and distributed as seen in the first illustration.

#### Rice Every Year, Yet a Rotation

With one acre of land in the green manure crop, grown between the rice harvest of one season and the time of transplanting the next, there are left two or three acres to bear other crops. One of these, as we have seen, may be rape, another may be wheat or barley, so that each year, in the rice country, there follows the rice crop either some humus-nitrogen-producing crop, rape, or wheat or barley. There is thus maintained a systematic rotation notwithstanding the fact that the fields may be in rice every year.

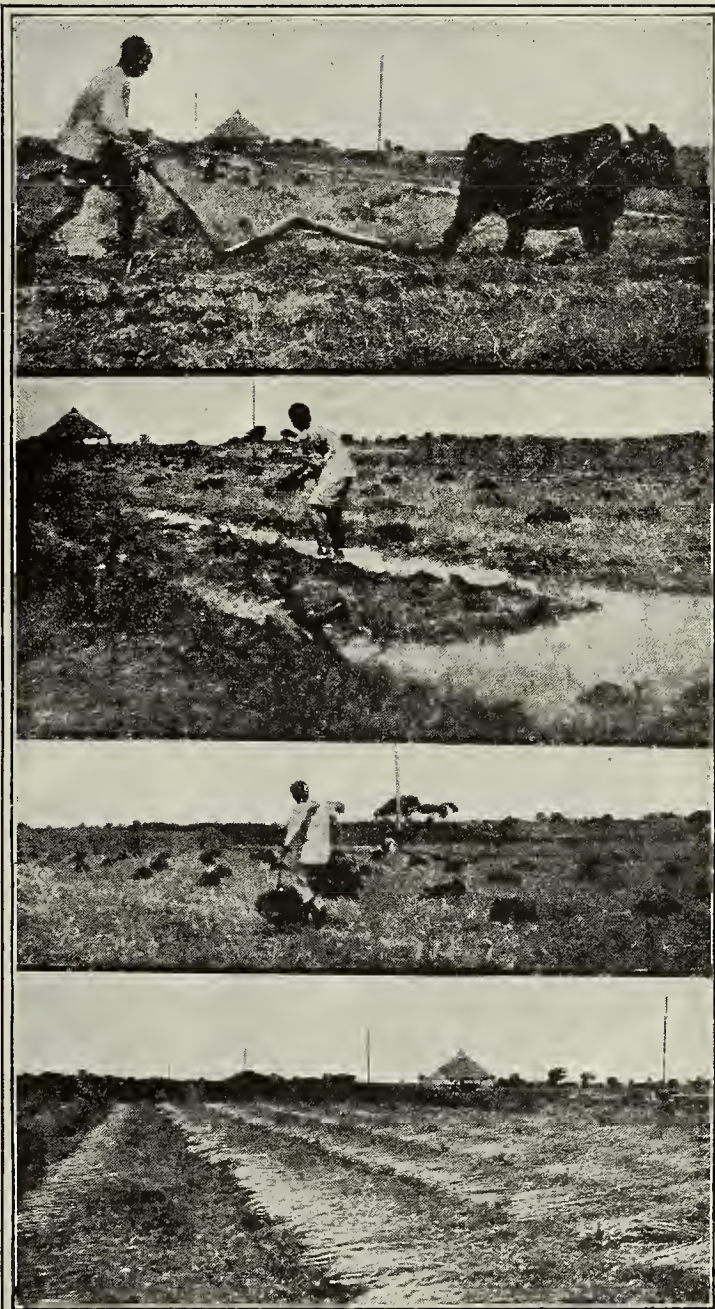
Good crops of rice range between thirty and sixty bushels per acre, with forty-five hundred to seventy-two hundred pounds of straw which, like the rape stems, is very extensively used for fuel, selling for thirty cents (Mexican) per one hundred "catty," or at the rate of about two dollars (gold) per ton.

In money value the rice crop ranges from twenty dollars to forty dollars (gold) per acre for the grain, and from four dollars to eight dollars for the straw, making the gross earning for this crop twenty-four dollars to forty-eight dollars per acre; and to this is to be added the returns from the winter crop which, in the case of rape, as we have seen, was something over nine dollars, besides its fuel value and more than three dollars in fertilizer.

Canal mud, wherever it is available in China, is used very generally, oftentimes in enormous quantities, even alone. We have photographs of two instances where single applications have exceeded seventy tons per acre, and this all carried on the shoulders of men. Such mud is very rich in organic matter; the liquid form is esteemed equal to human-manure in value, being not quite as quick in action, but more enduring. It is often heavily charged with living snails and other animals and the shells of those which are dead, and wherever this practice is followed the soils have an abundance of lime. Nowhere in the United States have we seen soils so densely occupied with earthworms as we saw them in China, and the species there are of monstrous size, as long as lead-pencils and nearly as large around. Such numbers could not exist in the soil if it were not richly charged with organic matter.

The choice of rice as their staple crop, by these three nations, has several important advantages in securing high maintenance capacity for their fields, not only in permitting them to utilize their rainfall to the best possible advantage, but also in making it easier to maintain soil fertility.

[CONCLUDED ON PAGE 4]



Upper figure; plowing field for rice; second figure, spreading green compost, softened in water coming from pump under the shelter; third figure, bringing the compost to the field; below, field of rape lying between second and third fields, pulled and waiting removal

extensively cut and sold in the market as human food to be cooked and eaten as we eat cabbage, or it is packed in casks with salt and kept or sold as "salted cabbage" for food to be eaten with the rice, which is always cooked without salt.

#### Soil Charity Instead of Soil Robbery

To make up for the organic matter lost by burning the stems, and for nitrogen, this household was using a compost made from a green legume, one of the milk vetches (*Astragalus sinicus*) which had been cut twen-



# The Farmer's Share

Wanted: A Guarantee for the Square Deal—By L. C. Corbett

THE farmer, representing the greatest wealth-producing class in the world, because of the independent character of his calling has been slow to feel the encroachment of the organized industries which now so thoroughly surround him. Now, he begins to feel their pressure. He is confronted on the one hand by powerful organizations which fix the price of everything he has to buy from binder-twine to a traction-engine, and on the other hand by people who keep tab the year around on the crop prospects, so that when the market season for any important crop arrives the market knows much better than the farmer what is in sight both in the shape of hold-over and new crop to be offered. It is on this information that prices are fixed, and to say that they are not fixed for the advantage of the party possessing the information would be accusing him of gross negligence.

This, we believe, is a fair statement of the facts in the case. It is evident that the farmer is in a corner and needs help. How can this much-needed aid be offered, is the all-important question. The general principle underlying all true aid applies with as great force here as in other lines of development. The greatest assistance that can be offered any class is the aid which enables them to help themselves.

How can the producer of the nation's rations secure just remuneration for his investment in land and labor? Is thirty-three and a third per cent of the cost of food products to the consumer a just remuneration for the farmer who has capital invested in land, implements and labor to produce the crop, who pays transportation to market, and also pays the first charge for selling? If this thirty-three and a third per cent of the cost price to the consumer meant profit to the producer there could be no complaint; but out of the thirty-three and a third per cent of the cost to the consumer the farmer must pay interest on capital invested, maintain equipment, meet cost of production and figure his profit. When this is done the average farmer is lucky if he has day laborers' wages for himself.

## Legislation for Immediate Results

What is the remedy? The remedy is plain. Society must be taught not to kill the goose that lays the golden egg. But the task of educating the masses or even classes to protect and foster a great industry is a herculean task, not only that, but education is a slow process. What is needed are immediate results. Such results are possible, it is believed, but they must be secured by short-cut methods in order to be immediately available. That means that legislative enactments must be obtained. The object of the legislation should be to make it possible to guard the produce of farm products from unscrupulous merchants.

What industry can be expected to prosper under conditions such as these? The farmer invests his capital, his labor and his brains in the products of his farm. This much he has control over, but the next step is to sell the product. For this transaction two

avenues are open to him. He can avail himself of the local broker in such products or he may ship it to a city broker, on commission. This is the meat of the coconut. A large fraction of the products of the farm are sold by consignment, this applies particularly to the perishable products of the farm. Selling on commission, yes, that is an old and well-established principle in our economic system. There is nothing new or startling about it; yet stop a moment, what has happened? A car-load of fine cabbage is shipped to a commission man. Reply: Cabbage received in bad condition, held by railroad company for freight, please remit \$16.50 to pay freight charges. Did this ever happen to you, my reader? If not, it is as likely as to my friend Mr. A. Should this be possible? But it is possible and is happening to hundreds of industrious, hard-working people every year.

Something is wrong! What is it? Is it the farmer or the commission man? We say neither, provided they are honest. The fault is in the system. Would you consider it good business to send your money to a man you only know by correspondence, and virtually say to him, "Take this, exchange it for me and return me what you please?" Yet this is the very thing that is done day after day, the only difference is that the exchange is not based on money as such, but on products the result of toil which represent value, just as truly as does any form of currency. Yet in one case every sane man would say one was foolish to do such a thing when we have so many good banks. Is it less foolish in the second case, let me ask? Can any business succeed under such a system?

Is there a remedy? Yes! It is simple, it is no innovation, it is in every-day use among us. It is this: Throw the same safeguards around the commission business now placed about the banking system of the country and the problem is solved in part. Honest brokers and commission men will welcome such a system, it will place their business on a high plane. The dishonest ones will be eliminated and with them a great share of the loss annually sustained by shippers.

The plan is a practicable one. The main features are, in brief: To require the men who traffic in commodities that represent the investment of capital and labor to qualify for their business by establishing their credit by giving satisfactory bond. Require such merchants to keep a uniform and open set of accounts subject to inspection by the consignor or by duly authorized agent of the state or national government. Maintain short-tenure itinerant inspectors in every market whose duty it shall be to inspect consigned goods as they arrive, inspect sales and keep tab on the books of the merchants the same as do bank examiners. This plan contains the germ of a national commission business.

The next step is to transfer the distributing center from the city to the field—that is, the producer should become his own distributing agent. This is being done in some of the most progressive farming sections of the country to-day. The California Citrus Fruit Ex-

change is a striking illustration of this type of business organization. The Eastern Shore of Virginia Truck Exchange is another notable example of the same principle applied in another field. The advantages of such organizations chiefly consist in the ability of the producer to deal direct with the city and town merchants, instead of consigning his products to city brokers who sell to these same merchants in the smaller cities and towns. These merchants have shown themselves willing to deal direct with the exchange and purchase the products f. o. b. shipping point. This, of course, involves the production of high-grade products in order to maintain a reputation which will sustain such a standard of business. The organization has a great advantage over the individual in handling its business. Better business methods can be followed. The transportation companies listen to a large controlling organization when they would give no heed to the individual.

## Commission Business in the Field

These are the results from such organizations when well managed, and they could all be so managed if placed under the protective laws above suggested for the commission men. In fact, the properly-conducted agricultural exchange is simply the transfer of the commission business from the city to the field. The exchange must have a commission to live, and if it saves to the producer the cost of transportation, furnishes him a ready market at current distributing-center prices, adjusts claims with transportation companies and provides satisfactory carrying conveniences at a commission no greater than that charged by the city broker, it has served a useful purpose. One organization of this character during the past season handled \$2,500,000 worth of farm produce in this way. Over ninety per cent of its business was handled on an f. o. b. shipping point basis. This alone meant a saving of about seven or eight per cent on ninety per cent of \$2,500,000, or nearly \$158,000 to the producers in transportation alone; and the gratifying part of it is that the product cost the merchants in the smaller towns and cities no more than it would had it first gone to one of the great cities and there been reshipped to the smaller towns in which it was consumed. In fact, the system is an advantage to the merchant because he secures fresher stock. From one to three days is saved between the field and to the consumer by this short-cut method.

So long as we cannot avail ourselves of a parcels post or of a cheap and efficient express service for placing the products of the farm first hand to the consumer, we must content ourselves by reducing losses through a legalized commission business carried on under government supervision, and by shortening the distance between producer and consumer by doing our own distributing through legally-protected cooperative produce exchanges—not forgetting the saving secured by this direct method, nor the importance of educating the people as a whole that it is their duty to deal fairly with the man behind the plow.

# The Agriculture of Three Ancient Nations

[CONTINUED FROM PAGE 3]

In the first place, one thousand pounds of wheat sold from the farm carries with it 23.6 pounds of nitrogen, 7.9 pounds of phosphoric acid and 5 pounds of potash; while the same weight of rice would carry away but 10.8 pounds of nitrogen, 1.8 pounds of phosphoric acid and .9 pounds of potash. Stated in another way, the same amount of soil nitrogen which we require for sixty bushels of wheat permits China, Korea and Japan to produce one hundred and thirty-one bushels of rice. The amount of phosphoric acid we remove from our fields with sixty bushels of wheat is all that is carried in two hundred and sixty-three bushels of rice. And in the case of potash, sixty bushels of wheat remove, in the grain, the same quantity as that carried by three hundred and thirty-three bushels of rice. Choosing rice as their main diet, for each pound of soil nitrogen they get nearly three pounds of food, where we get one; for each pound of phosphoric acid they get four pounds, where we get one, and for each pound of potash removed from their soil they get five pounds, where we get one.

We do not know, accurately, the relative efficiency of wheat and rice as a source of power when used in the human body, but if they are anywhere nearly equal it is easy to see the great advantage gained in choosing rice as their staff of life, for it is made more largely than wheat from the inexhaustible supplies of water and carbon dioxide; their necessary supply of nitrogen for the body comes as an incident in maintaining the nitrogen in the soil which is needed in the production of rice.

## Soil Economy Plus Fertilization

In the second place, in the cultivation of rice the fields are kept under water continuously during a large share of the growing season and under these conditions the loss of organic matter is less than it is in soils thoroughly cultivated when dry. At the same time other plant-food materials are brought to the rice-fields with the large volumes of water used, and in very material amounts, notably so whenever the waters are at all turbid, as they often are.



Above—Chinese farmer dipping canal mud into boat to use in making "clover" compost. Below—Recently completed stack of "clover" compost. Umbrella serves as scale to judge size of stack. It is stacked green and will ferment twenty days

But notwithstanding the fact that the methods of agriculture followed by the people in the far East are less exhausting to their soils than ours are, they either manure their soils or directly feed their crops far more persistently and to a greater extent than we have come to do. Indeed, accurate statistics which we were able to secure through the Bureau of Agriculture in Japan show that in 1908 the farmers of that country prepared and applied fertilizers of one and another kind to their lands in such amounts as to average more than four and a half tons per acre of cultivated land in the main islands. In these countries practically all cultivated lands are fertilized in some way once every year and more often with each crop grown upon the ground, whether the number is two, three or four.

## How Far Should We Follow the Orient?

Our farmers need to remember, too, in this connection, that these extensive, persistent and rational practices in fertilization are applied to soils naturally quite as fertile and enduring as the best of ours, and they are persisted in in a warmer climate, with more rainfall, having a better distribution than we have in most parts of the United States, and each of these conditions materially augments the efficiency of plant-food carried by the soil and developed in it. In the face of all this there is not the slightest ground to hope that the best possible systems of rotation of crops, coupled with the maintenance of the best possible physical conditions of the soil, can together be made to produce in our own country the amount of food which such dense populations as exist in the far East require. Adequate and rational fertilization must in some way be combined with the other two. Let us hope that the farmers of the future may be helped to lighten the enormous burden which is now being carried by the farmers in the far East and which they have carried through all the centuries.

Such results as the orient is getting to-day we must get. Can we secure them with less of bodily effort and with more time for worthy enjoyment and intellectual life?



# How Good Planting Pays

## Every Man His Own Landscape Gardener—By Edward I. Farrington

Nature gives generously to country folks in the way of chances for the adornment of their home grounds; but in the press of daily things that look more important, too many of us neglect to use those chances to the full. Mr. Farrington here presents home landscape gardening in a new light—as an investment.—EDITOR.

**D**OES the planting of trees, shrubs and flowers pay—pay, that is, in the sense of increasing the cash value of the farm property? Ask any real-estate man who deals in farms and who is experienced and frank. The answer invariably will be that those farm properties which have the most attractive grounds are those which sell first and to the best advantage. There seems to be a general idea that the farmer, in his struggle for the more material things of life, has lost the capacity to appreciate the artistic and the beautiful. When, indeed, one sees farm buildings covered with signs advertising cheap tobacco and patent medicines he is inclined to think that this impeachment has a real basis in fact. And, no doubt, there are farmers aplenty whose souls have become so sordid that they have no appreciation of those things which appeal to finer natures, but in the majority of cases, after all, we may believe that farm grounds lack the attractiveness which they ought to possess if the place is to convey the atmosphere of a real home, simply because they never have had an opportunity to learn the simple principles of good planting.

Where the planting has been properly and tastefully done, however, the charm is immediately recognized, and there are few farmers, after all, who would not be glad to make the home grounds pleasing and inviting if they realized that it could be done with comparatively little trouble and at slight expense. They would be doubly willing did they realize the fact, and it is a fact that the value of a property invariably is enhanced to a very large extent by this treatment.

Few people realize the actual value of a fine tree, though there are many property-owners who possess trees with which they would not part for a thousand dollars apiece. Frequently when railways have taken planted lands they have been forced to pay from twenty-five to one hundred dollars for each tree which has been destroyed. Prof. Elias A. Long once cited a case where six hundred dollars apiece was awarded in solid cash to the owner of several large elm-trees that stood on some land which was needed for industrial purposes. Certainly the planting of these trees paid an enormous profit.

The wisdom of liberal planting, when it is well done, never is illustrated to so good advantage as when it becomes necessary to dispose of the property. There are countless instances where beautiful trees and shrubs have atoned for poor buildings, and have resulted in an advantageous sale where, without this planting, the price obtained would have been very unsatisfactory. In other words, a tree costing only a few dollars, planted in the proper place on the grounds, is worth as much in the ultimate valuation of the property as many times that amount expended for ornamenting or decorating the house itself.

This is particularly true when the purchaser is a man or woman from the city. A country house which is surrounded by a bare and uninviting yard, without trees or flowers, or even a lawn, presents a picture which is almost certain to repel the buyer. On the other hand, a place where the house nestles delightfully among tall trees, underneath which there stretches a broad expanse of green sward, with brightly colored flowers here and there, immediately appeals to the senses of the prospective purchaser and predisposes him at the very outset in favor of the property. He becomes less critical of the house itself and of the other features in connection with the place. In short, it often is twice as easy to dispose of a well-planted place to good advantage than of one where this feature has been overlooked or neglected.

I recollect at this moment a New England farm which was somewhat neglected when bought by a man who appreciated its possibilities, and who promptly proceeded to make it attractive by the simple expedient of painting the house, putting on a few blinds and planting flowers and shrubs in such a way as to make the house appear to the very best advantage, the result being that within a year the property was sold again at an advance of several hundred dollars, although a considerable amount of timber had been cut off, thus causing a real depletion in the actual value of the farm.

I remember the case of another farmer who found that there was money to be made in keeping summer boarders, and who wisely proceeded to arrange his

house and grounds in such a way that it would appeal to the esthetic sense of city people who wanted to find a place which would satisfy them along the lines of their own ideals of what the country ought to be. The result was that after a few years of money-making, the property was sold at a most attractive figure.

Not long ago I heard of a country place in one of the central states, the selling value of which was nearly doubled in the course of a few years. In this case trees and shrubs were put in thickly so that in the course of time the house was almost hidden from the roadway. Planting of this sort is not always to be recommended; it depends upon the situation, the character of the grounds and the general appear-

as saying: "I have made more money creating my lawn than I ever did in taking a fat ox from the stall or a bushel of potatoes from my cellar. A man will stand on the public road in front of my place and give me more for my property on account of my lawn; but money is not the only thing in the world. The lawn makes the boys and girls want to stay on the farm. It is on the lawn that we spend our spare moments on Sundays entertaining our friends in the summer, and there beneath the shade of the old apple-tree the smoke curls more beautifully from my chimney than from any other I ever saw."

It is not at all difficult, if one cares to take up the other side of the case, to find instances aplenty where farm-houses have been sold almost for a song simply

because of the forlorn and desolate appearance presented by the grounds. Even the proverbial abandoned homestead makes its powerful appeal to the sense of the beautiful in prospective city purchasers who are looking for a country home. This fact has been exemplified time and time again of recent years, since the desire for a summer home in the country has become so pronounced. Men and women who were willing to pay a good price for what suited them have driven through the country, either in the company of an enterprising real-estate man or on their own initiative, and have repeatedly passed by well-built, substantial homes and profitable farms, where the planting of trees, shrubs and flowers had been overlooked, only to buy, at a liberal price, some run-down farm with more or less dilapidated buildings, but where fine old elms overshadowed the house, with lilac-bushes in the fence-corners and rows of gorgeous peonies blooming along the walks. The city man knows that he can plant these things and get the desired result in time, but he does not want to wait. He prefers to spend more money in fixing over the house.

There is another way in which good planting pays. Wherever

the wind has full sweep across the fields and hills it drives the cold through the walls and windows of the most carefully constructed house or barn, immensely increasing the cost of heating the buildings as well as bringing hardship to the stock, causing them to suffer in health and lose in weight. Therefore, the construction of a wind-break pays in hard cash. Such a wind-break, consisting of evergreen trees closely planted and with branches close to the ground, is not only of practical value in cutting off cold winds, but also has a decided ornamental effect. Oftentimes it is possible to place the wind-break where it will screen some objectionable features, such as unsightly outbuildings.

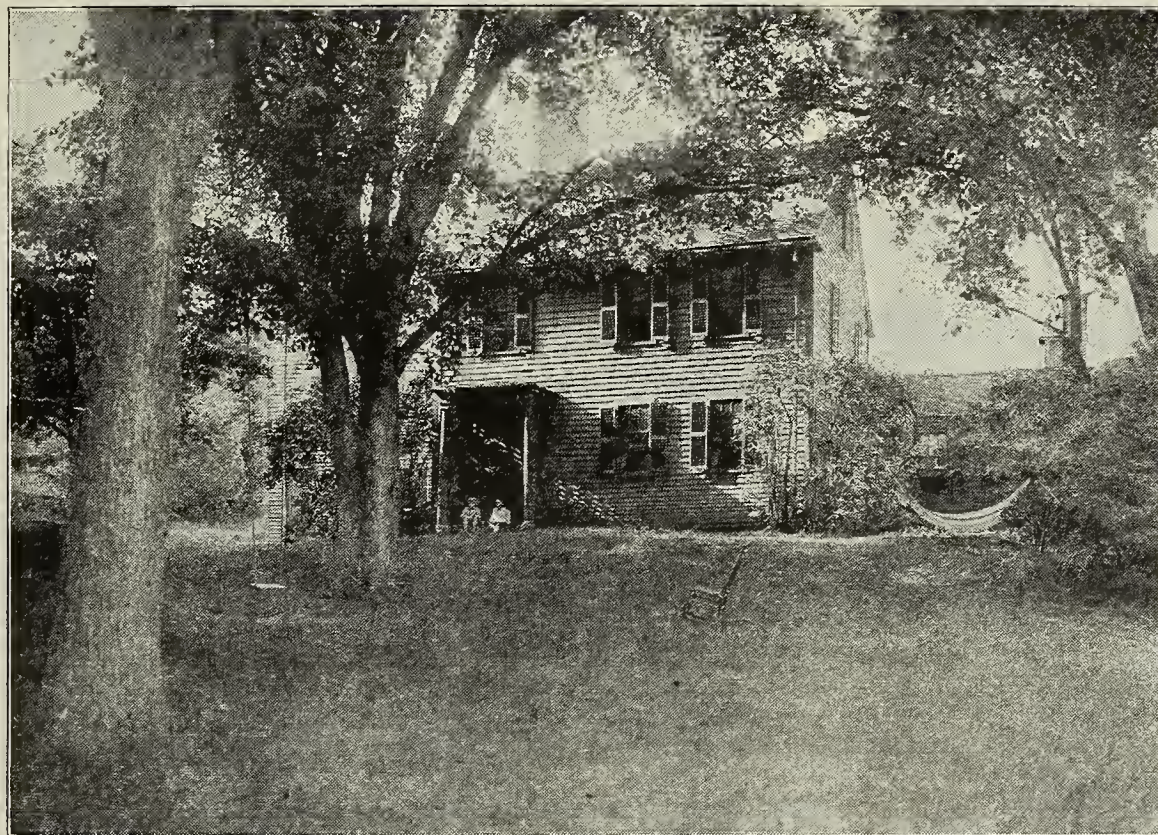
And what shall be said of the effect of beautiful planting on the members of the household, all the way down from the hard-headed, horny-handed head of the house to the growing boys and girls, whose characters must be formed amid the environments of the home. It is reasonable to suppose that the boys and girls raised among conditions which prevent any development of the finer qualities, will grow into hard, sordid, selfish men and women.

It is possible, too, to combine the esthetic with the utilitarian, for in many cases fruit-trees may be planted close about the house with an eye to their beauty. What, indeed, is more charming than an apple-tree in full bloom? If the fruit-trees are properly trimmed, they will remain for a lifetime as objects of never-failing loveliness. A few evergreens, either in the form of trees or shrubs, combined with the fruit-trees may constitute all of this kind of planting needed, and the effect will be as beautiful in winter as in summer.

The great trouble often lies in the fact that the owner does not appreciate the fact that there are certain fixed principles which must be followed if the planting of the home grounds is to be effectively done. For instance, in the case of a narrow village lot, it would not pay to plant the standard apple-trees or large ornamentals, which would be just the kind needed on the ample grounds

of a country home. There are smaller trees, with a less spreading habit, for the narrow lot; indeed, sometimes it becomes necessary to dispense with trees entirely, but to use climbing vines, which may be grown in such profusion as to create a charming effect. One of the principal facts to remember in any case is that the planting should not be crowded and that there should be an open spread of lawn in the center with the trees, shrubs and flowers grouped around the sides. Single specimens should not be planted as a rule, but the planting should be massed at various points as in the corners and at the entrances. Straight lines should be avoided, the purpose being to secure curves and

[CONTINUED ON PAGE 23]



An Ordinary House—But the Trees and Homelike Shrubbery Make One Want to Live There

ance of the house itself. In this particular instance the heavy planting was just what was needed in order to make the place one of surpassing charm. The house, which before had seemed barren and unattractive enough, now presented an entirely different appearance.

Of course, years were required to bring about this transformation, and the natural rise in real-estate values in that section had something to do with the



A Town House Without Even a Shrub—New, Expensive and Unattractive

increased worth of this property, but the planting was largely responsible and the general beauty of the grounds was such as to insure a sale at any time. In another instance much the same results were secured by an entirely different treatment. This place was not far from the city and too liberal planting would have been a mistake, which the owner was wise enough to avoid. Shrubs were massed in corners and along the borders and a few trees were used, but the entire aspect of the place was changed so that where it formerly consisted merely of a house and a certain number of acres of ground, it now became a home, with a genuine appeal to the best in human nature.

Bolton Hall quotes a prominent Pennsylvania farmer



# Our Respects to the Guinea-Hen

## The Faults and Virtues of the Oddest Member of the Flock

OF ALL branches of poultry-raising none is so much neglected as the raising of guineas. Nearly every family in the country has a considerable flock of chickens and perhaps a few turkeys, ducks and geese, but it is seldom one sees any "speckle-backs" among them. This may be, perhaps, because their merits are not generally known, while their faults are a joke everywhere.

About the only real objection to them is their wild nature, but a flock may be controlled, to a great extent, by observing proper methods in raising them. By hatching the eggs under common hens, much of the trouble in getting them to behave more like domestic fowls is avoided. To make domesticity doubly sure, it is well to put two or three chicks with each hen that is raising a guinea family. The young chicks will obey the hen, and the young guineas will follow their example, with the result that the guineas will keep with the other fowls as they grow and also go into the poultry-house to roost with them. If the poultry-house is near the dwelling, so that the guineas will daily come into contact with members of the family, they will become more tame than otherwise. Under such conditions it is not unusual for some of the guinea-hens to lay in the poultry-house with the other fowls, although their natural instinct is to hide their nests.

Where they lay away from the poultry-house, guineas are very sly and secretive about their nesting, often straying off to a great distance. Their peculiar cackle after laying is a great help in finding hidden nests.

Sometimes a number of guinea-hens will lay in one nest. They dislike having any of the eggs removed, and several nest-eggs must be left. Some believe that the eggs must not be removed with the bare hands, but that gloves must be worn or a long stick used to roll the eggs out. Like a lot of other notions, this does not hold true more than half the time, and then the hens probably desert the nests because most of the eggs have been removed and not because they are fastidious about bare hands.

The breeding season of guineas usually begins in April and they continue laying throughout the summer. An average of one hundred eggs per hen is about correct. The period of incubation for guinea-eggs is about twenty-eight days, but may vary a day or two either way. As before stated, it is best to hatch the eggs under a common hen, to insure domesticity. Besides, guinea-hens are rather poor sitters. They are of a restless na-

ture and seldom stick to their nests close enough to insure a good hatch. And the little chicks that do hatch often come to a sad end when they are permitted to wander around with their mother through the wet grass of early mornings and on rainy days. The old birds are very hardy, but the little chicks are sensitive. For this reason they will thrive better if raised with common hens that are willing to come in when it rains.

The newly-hatched chicks run about actively almost as soon as they are out

as a substitute for wild game birds for table use and in the larger cities the demand for them is already increasing. The eggs of these fowls also possess much merit. Although not so large as chickens' eggs, they are richer and more nutritious.

Another good point about guineas is that they make good "watch-dogs." Every person who writes of these fowls mentions this point, but a good thing will bear repeating. In common with wild birds they are always on the lookout for

The guinea is as good an insect-destroyer as the crow, besides being a very excellent egg-producer in the summer season, while the flesh of the guinea is preferred by many to that of the chicken. It is firm, of gamy flavor and of an excellent quality. The guinea-hen usually commences laying in April and will lay an egg nearly every day until about the first of October. The eggs are smaller than the chickens', but they are better flavored and usually sell at the same price as the hens' eggs, once the consumers can be persuaded to try them. There is not usually a very strong demand for them, however, and it has to be worked up.

The young guineas are rather hard to raise, and it is best to hatch them under chicken-hens, as the guinea-hens do not usually get broody until late in the season and, at that, are likely to trail the young ones in the wet and lose them.

There are two breeds of guineas, the white and the pearl. The former is pure white in feather, and the flesh does not have the bluish color which is an objection in the pearl guinea. On this account the white guinea is preferable for cooking purposes.

The white guinea, however, does not seem to be as good an egg-producer as the pearl. Both are about the same size. I thought for several years that the young white guineas were harder to raise than the pearl, but last year we had a mixed brood of whites and pearls hatched at the same time. They had the same treatment and we raised a larger per cent of the white ones. This year we have a brood of half-breeds, half white and half pearl. They seem to be harder than pure-bloods of either breed. If it had not been for the depredations of a cat we would probably have raised nearly the entire brood, as we lost only one besides the ones that he caught.

The pearl guinea is of a lead color with white specks in the feather. A cross of the two breeds does not make a uniformly colored bird, as some of the feathers are pure white and some birds have more white on them than others.

Where guineas can have free range, they are a profitable bird to grow, as they are better insect-destroyers than chickens, and they are not as bad to trail down and eat grain. Our guinea-hens laid eggs last summer that sold for three times what the birds would have cost if we had purchased them in the spring, and the best part of it was that they were made principally from insects that injure crops. By employing guineas we can turn even our worst insect enemies into a marketable product.

A. J. LEGG.

### Lines to a Guinea-Hen



I hear thy squawk at morning-time, sweet bird;  
When rosy-tinted clouds float in the skies,  
Through dewy distances thy song is heard;  
Above the robin's note thy carols rise,  
Not low and bashful; no, but glad and strong  
Squawks to the clouds thy clear, exultant song.



I cannot catch thy warbled note, sweet hen;  
Would thy soft numbers might inspire my rhyme!  
Could I but make your cackle with my pen,  
How down the ringing corridors of time  
I'd send thy vesper hymn, dear speckle-back—  
K'n ka, k'n ka, ka, ka, k'n ka, ka, kwack!

I see thy papier-mâché head, shy guinea-hen,  
Where flame the scarlet poppies in the sun;  
To reach thy nest, far from the haunts of men,  
About four thousand miles thou hast to run,  
Deep in the bending grass, close by the old rail fence,  
You lay your lays in eggstasy intense.

Thy feet are swifter than the sands of time;  
When down the lane I hear thy distant squeak  
I see thee through the fence get up and climb,  
And cross the meadow, one quick, speckled streak;  
Swift be the bolt to catch thee on the fly,  
And ostriches, that see thee run, go home to die.

When evening falls and loud the crickets sing,  
I see you duck beneath the barbed bars,  
And in the orchard's gloom, you bashful thing,  
You lay yourself to roost beneath the stars.  
And still with tireless squack your vigils keep  
And strive to sing your answering mates to sleep.



I glean the lesson of thy life so sweet,  
To toot my horn, though I may sell no clam;  
To make no carol loud, my footsteps fleet,  
That men may hear, but not come where I am;  
And hide my treasures where no human arm,  
You bet,  
Can take my unsung songs to make an omelet.  
—Bob Burdette in Burlington, Iowa, Hawkeye.



of the shell, and, as they are very tiny things, they are apt to get lost. They should be kept confined for at least a week after hatching, unless the hen can be given a run on short grass. Guinea-hens have a way of calling lost chicks; but common hens can only cluck as Nature intended they should, and the little guineas pay no attention to this at first. Young guineas may be given a feed much the same as for young turkeys, after a fast of not more than twelve hours after hatching. They grow and feather rapidly.

The flesh of the guinea is rather dark, but is tender and possesses a gamy flavor not unlike that of some wild game birds. For this reason, many dealers in market poultry advocate the raising of guineas

enemies, and quickly detect hawks, dogs, strange persons, etc., that venture near. Their wild cries on such occasions soon put the intruders to rout, and also put all the fowls on the place on their guard. If hawks are numerous, a few guineas in the flock will prove of great help in preventing their depredations.

W. F. PURDUE.

THE wild, noisy nature of the guinea is urged against it by many poultrymen. Guinea do not bear confinement well. They are of an active nature and prefer to range the fields for their food. But that very habit makes them the best insect-hunters we have. Many farmers advocate the protection of the crow on account of his insect-destroying nature.

## The Grist-Mill of the Fowl

### What the Chicken Does With Grit—By L. C. Seal

NOT less remarkable than mysterious is the digestion of a fowl. This is true of the powerful digestants as well as the remarkable muscular action of the alimentary canal. Minus incisors and molars the hen can get her living alongside the swine, cattle and horses, who are well provided with both, and all she asks is her share. By the time food is expected to nourish, her meal has been reduced to a homogeneous pulp as thoroughly as that of the pig, and she is as promptly ready for the next meal as is the porker. This is not the conventional idea of poultry feeding, nor the best by any means, but it shows the capabilities of the digestion of a fowl. A hen picks up her "teeth" as needed. She casts about to find a "tooth" or "teeth" to whatever extent she opines will relieve her discomfort.

More than a year ago I was the recipient of a finely-bred cock. I brought him the distance of eleven miles to our suburb. Undoubtedly he had never seen a coal-cinder. When I turned him loose with my flock at feeding-time he seemed to be not so much interested in the fare, although it was appropriate and wholesome, as he was in getting himself some "teeth"—some grinders, if you please. Catching sight of a coal-cinder, quite a large one, he tested its specific gravity and resistance with his beak, promptly decided it to be just the thing he had been looking for and gulped it down. Finding it so adaptable, he chose another—and another. Having gotten his mill in grinding order he proceeded to make the acquaintance of his new friends.

Really I thought he had attempted suicide for having been severed from the companionship of his royal relatives, the cinders were so large—all that he could swallow. This misgiving was presently relieved, however, when his next demand was grit for the hopper. He lived to see a numerous family of his own descendants as lusty as himself.

Another instance of like sort came under my observation about a year ago in my own poultry-yard. To relieve the story of doubt, it would seem to require the sworn attest of one who, throughout life, had never been known to depart from the sacred principles of veracity. An overgrown, ungainly cross-bred cockerel had been presented to a junior member of the family by a neighbor because he would not grow fat. With reluctance I consented to feed him. Shortly afterward I was disposing of some table-scraps among my fowls. While discarding some articles which I deemed unfit for feeding purposes, I let fall, accidentally, the entire neck bone of a young hen. To make sure of it Mr. Cross-Bred picked it up instantly, gave his head a toss and it went down as readily as if it had been a piece of boiled suet. Vainly I expected his demise. A few weeks later, after special feeding, a finer carcass than his never graced a platter.

Oyster-shell (crushed) and sharp bits of limestone, in all probability, are the best grits for fowls. Any sharp substance, however, will relieve indigestion, but these two grits have the advantage of producing soluble lime in the process

of digestion, thus performing simultaneously a twofold function. In a moment of desperation a fowl may swallow a substance which might endanger its life. Such articles as pins, needles and pieces of pointed bone are sometimes found in the crop or gizzard after death. Such articles cannot possibly be of aid to digestion and I am strong in the opinion that they would never be taken, except on runs that have been gleaned threadbare of grit. I have noticed in winter when feeding whole corn for supper that the first demand of the fowls after eating was water. All the fowls that then felt any uneasiness visited the receptacle containing the crushed oyster-shell.

Overloading the crop, lack of variety of foods daily, too much highly-concentrated food, lack of appropriate grit, lack of exercise, all are conducive to dyspepsia and bowel trouble. Any one of the above conditions prolonged will produce these results, and two or more of them acting conjointly work the direst havoc among confined fowls. When the crop is filled, that meal should cease and supplementary feeds, such as green-cured fodder, clover, beets, unthreshed millet, will not permit the crop to become quite empty throughout the day. My habit is to pick up, one at a time, three or four members of the flock and pass the hand lightly down over the crop and determine whether any more should be fed at a given meal. As a matter of fact, every member of the flock should be solicitous for more at closing, unless it should be at supper on a cold winter

evening. My judgment is supreme, not theirs.

A few years ago I would have considered it a foolhardy trick to throw a handful of pulverized glass to a brood of baby chicks. To-day I consider it wise to do this very thing once or twice a week, giving it in addition to their perpetual supply of sharp sand. Pulverized glass means death to a dog, but it is nice for keen cutting in the grist-mill of a chicken.

The gizzard of a chicken is an interesting study. There can be no reasonable estimate of its great peristaltic power. Being a dense involuntary muscle it is stimulated to action by the presence of food and grit. Its lining is impervious to appropriate grinders and contains digestants that macerate and distill the life-sustaining elements that pass directly into the blood for nourishment. Let it be remembered that crushed or ground feeds require grit for digestion as well as whole-grain feeds.

It requires less effort and feed to keep a flock of hens fat, once you get them fat, than to eke out a mere sustenance or a full amount irregularly to a lean flock hungry at times to the point of desperation.

Give the mill enough to do and no more than it ought to or can do and your toll will be heavy. Fatness makes a hen proud, and destroys anxiety and fear. She goes about the premises uttering notes that her companions understand, that, when translated into pure Anglo-Saxon, mean to her promoter and keeper "I am well and happy."



## Sweet Clover Found Good

This article caps the discussion of the newly certified merits of sweet clover, which we have presented to our readers in recent issues. Sweet clover has been given a scientific try-out. Prof. B. C. Buffum, director of the Wyoming Experiment Station, has taken it in hand. He has grown it, fed it, tested and observed it, and has thoroughly demonstrated its worth. Furthermore, he has found hope of improving it, and has undertaken the task. Here is his account.—EDITOR.

**B**OKHARA, or sweet clover has so long been considered worse than useless that there is a wide-spread and almost universal prejudice against the plant.

Its hardness, adaptability, persistence and growing power under adverse conditions are well known, but it is not easy to convince the skeptical that it has any kind of value or that improvement may make sweet clover one of the most important of all our forage crops. My experience with sweet clover dates back some years and my results with the plant are such that the past season I planted twenty acres of it for breeding purposes and to improve the soil. I have two varieties and shall attempt crossing and hybridizing in addition to other methods of changing its character and composition.

So far as I am informed, sweet clover first came into use as a forage plant in Mississippi and other portions of the South. Then reports came from Utah that sweet-clover hay was being baled and used for stock-food. In 1903 I visited Big Horn Basin, Wyoming. Here on the "Pitchfork" Ranch, one of the best developed in the West, the owner told me that one year he planted and put up a large area of sweet-clover hay and that his cattle apparently ate it as well and thrived on it equally as well as they did on alfalfa. I then resolved to carry out some investigations of sweet clover.

There was an area of land on the Wyoming Experiment Station farm which lacked drainage and where the accumulation of alkali salts had destroyed a stand of alfalfa. This ground was covered with a menacing growth of what Western stockmen call "foxtail." This is not the tame foxtail of the East, but more properly a wild barley called "squirrel-tail grass" in the older botanies. It grows in waste places or sometimes in meadows, and the beards cause much trouble to stock eating hay contaminated with it. I planted four acres of this land to sweet clover in spite of the protests of friends that I should be mobbed for introducing and fostering what to them was only a dangerous weed. It was planted late, and in the short season made no growth that could be harvested the first year. The next season, however, I cut two crops and put up four small stacks of the hay. The yield of cured hay was two and one half tons to the acre. One half the hay was salted with seven or eight pounds of common salt to the load as it went into the stack.

The assistant head of our live-stock department was requested to make feeding trials with sweet-clover hay that fall, but either his own skepticism or some other cause prevented the order being carried out and my sweet-clover stacks perfumed the air through that winter and the next summer and fall before the feeding trials were actually organized. I must pause here to note the first beneficial effect of growing the sweet clover. In the two seasons it had cured the land of foxtail and apparently did some good to the alkaliized ground as well. Sweet clover is a weed-eradicator and nitrogen-gatherer worthy of wide and extended use. Our station chemists analyses, I remember, gave as high as twenty-three and eight tenths per cent crude protein, the others gave fifteen and nineteen per cent. At the same time our high altitude alfalfa-hay was showing more richness than other alfalfa with about sixteen per cent protein and high digestibility. Our richest sweet clover was higher in protein than any other roughage and showed one condition to be avoided. Care must be taken not to give too much of it, as stock may become cloyed and go "off feed" from overfeeding.

When given to the lambs on experiment, the hay was eaten with great relish, even the coarse stems being readily consumed. My man fed carefully and lots of ten lambs each were fed on sweet clover compared with alfalfa and with native hay, lambs fed the same corn ration. It is sufficient for present purposes to state that the butcher who dressed out the lambs testified that the sweet-clover-fed lambs were the fattest and finest carcasses he ever handled, and a photograph of the dressed meat showed much superiority of the sweet-clover lamb over lamb fed native hay. The sweet-clover lambs gained 30.7 pounds per head, while the native-hay lambs 20.3 pounds per head. The

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alfalfa lambs gained 34.3 pounds per head, a little less than four pounds better than the sweet-clover lambs. That is, sweet clover offers a substitute almost, though not quite, of the same feeding value as alfalfa, where the latter is not available. Perhaps a portion of the success was due to curing the hay in the stack a year before being fed. The people of this country have not appreciated the value of time in curing hay. I am told that old-crop hay usually brings a premium in the hay-markets of England. The evidence is conclusive to me that sweet-clover hay properly grown, handled and fed has a value worth while—at least in many localities where the plant will thrive and where alfalfa does not do well for any reason.

Perhaps no plant has a higher value as a fertilizing agent. Soil from sweet-clover land is useful in inoculation for alfalfa with nitrogen-gathering bacteria. So impressed have I become with sweet clover that I have taken up the task of its improvement by plant breeding. I believe it may be made to lose a portion or all of the coumarin, which is the bitter-sweet principle that makes it unpalatable to stock and, perhaps it may be possible to change it into a perennial.

The seed I bought for sweet clover at eighteen cents per pound was adulterated with alfalfa-seed, so I have a stand of about half and half sweet clover and alfalfa. However, this will not be a

serious disadvantage and I have hopes of getting quick results in improving sweet clover, both in palatableness and yield.

Any one who wishes to plant sweet clover for hay or soil improvement can get seed from almost any reliable seedsmen. I recommend planting fifteen or twenty pounds hulled seed to the acre. It may be sown broadcast if the seed-bed is moist and fine, or, better still, plant with a press drill not more than an inch or two deep. For hay it should stand thick and fine-stemmed and be cut before it comes into full bloom. The green hay is quite succulent and needs to be cured in small cocks, allowing it to get pretty dry before stacking and then use salt as indicated above. Sweet clover is a biennial plant and will all die the second season if not allowed to seed itself, so it need never become a bad or persistent weed.

B. C. BUFFUM.

Several points regarding sweet clover have been raised by interested readers. There is some doubt regarding its blossoming habits. In the North it is a biennial, seldom forming seed the first year. In Kentucky and further southward, however, correspondents tell us it will seed the first year with them, unless cut twice.

One farmer writes: "It does best on a soil containing a good deal of lime." Generally speaking, it seems to grow on almost any soil not too boggy or too

sour. A writer in the Ohio Farmer has had different experience, however:

"It is rather more difficult to secure a stand and crop of sweet clover than of alfalfa. As I have intimated, it often comes of its own free will where it is neither expected nor desired, but repeated efforts to start it where it has been wanted have uniformly resulted much less successfully than similar attempts with alfalfa."

That paragraph sounds a sensible warning to those who are figuring on sweet clover to do too much. As the writer further states, however, some of the unreliability of stand may be due to unreliable seed. Sweet clover is hardly a standard market article as yet. While most seed-houses carry it, many of them have never found it worth while to catalogue it, owing to the slim demand. The plant has been so little grown, commercially, that good seed is hard to get. A germination test is well worth while before planting.

We have a lot to learn about sweet clover. This much is fairly certain now: It is a first-class soil renewer. It will grow in many places where alfalfa will not. It serves to introduce alfalfa. When grown and cured right it makes a feed that stock will not only thrive on, but relish. As far as feeding value goes, it runs alfalfa a close second. As long as we do not make a fad of it, we believe it is destined to do many fine things for farmers. EDITOR.





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# Fruit-Growing

By Samuel B. Green

## Walnut and Butternut Trees

I do not know of any advantage from planting walnut or butternut trees in an orchard. There is, however, a good demand for black walnuts, and they generally fruit when six or eight years old, but, of course, do not come into full bearing until much older. The kind of soil on which they grow seems to make a difference in their early bearing qualities. There are many rough hillsides and pastures where black walnuts can be grown. Of course, the young seedlings would have to be protected, but once established and out of the reach of cattle, they will take care of themselves on retentive soils. Black walnuts and butternuts may be transplanted; but when they have grown several years in one place they are seriously set back by moving, since it is out of the question to transplant the big tap root, and it has to be cut off.

The ordinary white walnut is rather a slow-growing tree, and to make a Yankee guess at it, I should not expect them to bear under ten years old.

It is best to transplant walnuts, butternuts, bur oaks and other trees with big tap roots at the beginning of their second year, cutting off about one half the tap root. The tendency then is for all roots produced to grow downward, and they will form several tap-roots, instead of one, which is quite an advantage in transplanting.

Besides producing a nut crop, black walnuts and butternuts give a first-class quality of fence-post timber.

## Apple-Trees Not Bearing

P. F. D., Pryor Lake, Iowa—You state you have a dozen apple-trees planted nine years ago that have borne only two apples in that time and ask what you can do to make them bear. As you did not state the variety, I am left rather in the dark in answering. Some varieties, notably the Northern Spy, are very slow in coming into bearing in almost every location, and some which ordinarily produce fruit before the fifth year will not bear for a long time on some soils, especially where they make a tremendous growth of wood. You do not state whether the trees flower. Possibly they are growing in a location where the flowers that do appear are destroyed by frost. You will see that it will be necessary to give me more information before I can answer the question intelligently.

## The Life of Balsam Timber

John Evans, Duluth, Minnesota—Balsam fence-posts, peeled or otherwise, do not last long in contact with the ground. In fact, so short-lived are they in such positions that I do not regard them as worth using there. Balsam timber is mixed with lower grades of white pine and used for a variety of purposes, but it is in any event inferior lumber.

There is no satisfactory treatment for unpeeled balsam. If balsam posts were peeled and dried they could be treated with creosote and so made durable in contact with the soil and also proof against borers. I do not know the waterproof material which you refer to under the name of "Insulite." It is very probably some form of creosote. If your idea is to paint the posts with it, I should say that if the posts were thoroughly dry and if the painting was done well, the life of the posts would be lengthened two or three years; but this is merely guesswork, although founded upon some experience I have had with other posts treated similarly. If the posts were properly treated with creosote they should last fifteen or more years. One wood will last as long as another if so treated.

## Distance Between Apple-Trees

The distance apart between apple and other orchard trees has been increased by mutual consent of late years. This is due to the general introduction of spraying methods by the best orchardists, which makes it necessary to go among the trees with a wagon.

None of our apple-trees should be planted nearer than thirty feet apart each way. For the stronger-growing kinds forty feet is none too much. A good method would be to plant them thirty feet apart in rows forty or more feet apart, since in this way the trees can be easily cared for, and the wide

space between the rows can be used for some crop that will not interfere with the orchard, or it may be filled, temporarily, with peach or some early-bearing variety of apples.

I think potatoes one of the best crops to raise among fruit-trees, since they are off of the land in good season in the autumn and cultivation is not carried on late, which might encourage a late growth on the trees. Sweet corn is also good for the purpose, but the desirability of growing it depends upon how you are fixed for marketing.

The coreless apple that has lately been put on the market is probably worthless and not hardy in this section.

## How Far to Prune Apple-Trees

I believe that a reasonable amount is desirable, but that the pruning should begin early in the life of the tree, and should consist of little more than the taking off of small branches. Severe pruning and the removal of large branches at any time of the year is not desirable, especially in the Eastern states, and generally results in stimulating a growth of sprouts from the trunk and getting the tree out of shape. The height at which the trees are to branch should be determined soon after the trees are planted, and all extra limbs removed soon after they appear, when the wounds will quickly grow over. Of course, awkward branches occasionally start from the tree that, for instance, would become interlocking were they allowed to remain. Such should be removed; but the close system of pruning apple-trees followed in some sections I do not think desirable for the Northern states.

In New England and other Eastern states, it is customary to have the apple-trees branch about four feet from the ground. This makes it easy to cultivate near the trees. But in the Pacific Northwest and in Wisconsin, Minnesota and other states in the great central plain, it is generally desirable to have the trees branch not more than three feet from the ground, since in this way the branches of the trees protect the trunks; then, too, the fruit is nearer the ground and more easily picked.

## What is a Nectarine?

A nectarine is a smooth-skinned peach. The skin is as smooth as that of a plum and the seed is like that of the peach. Peaches have been grown from the seed of nectarines and nectarines from the seed of peaches. This would seem to show that one was a sport from the other. The fruit of the nectarine is always, so far as I know, inferior to that of the best peaches, both in size, quality and appearance, and I believe it is grown largely as a matter of curiosity. If I am wrong in this, I would be very glad if some of our subscribers would put me right. Sometimes I notice in our markets some very good nectarines, but they are seldom offered in the general market.

## Grasshoppers on Fruit-Trees

The orchard of an Ohio subscriber has suffered from the attacks of grasshoppers. About the only defense in such a case is to prepare baits for them. What is known as the Criddle Mixture is very effective against grasshoppers, as they eat it with avidity. This is made up as follows: One pint of Paris green and one hundred pints of fresh horse-manure. The foliage might be sprayed with Bordeaux mixture to make it distasteful to the hoppers.

## Wealthy Apples in Solid Blocks

The Wealthy is a variety of apple that seems to do well when planted by itself in solid blocks. However, I think it desirable to grow amongst it some other hardy sorts, such as Duchess of Oldenburg or Patten's Greening. The chances are that cross-pollination will help it, and if one has a market for Duchess he may well plant this variety if there is room.

## Cold Weather Pruning Bad

L. Martin, La Crosse, Wisconsin—It is a bad practice to prune grape-vines in severe winter weather, but on mild days in winter, when the frost is out of the ground, there is no objection to so doing. Pruning in cold weather leaves rough cuts and much valuable wood is liable to be broken.



## Tomatoes From Seed In 80 Days!

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# Gardening

By T. Greiner

## Preparing Spray Mixtures

FOR spraying in the garden it is of utmost importance that we prepare our mixtures the right way, in accordance to either approved formulæ or to results of our own practices. A West Virginia reader has tried to check or control celery blight by spraying with Bordeaux mixture. He used one fourth of a pound of copper sulphate, one half pound of lime and five gallons of water. Of course, the applications did no good.

The mixture was weak in copper sulphate and further weakened by excess of lime. The right formula calls for about one part lime, one part copper sulphate (blue vitriol, blue-stone) and ten gallons of water. If he had used one half pound each of the two minerals to five gallons of water, some effect might have been obtained. Celery, however, is less sensitive to blue-stone applications than the foliage of most other plants and trees. I have often applied simple solutions of that sulphate in water and secured some benefit. Now that the lime-sulphur solutions have been found to be even more effective for fungous diseases than the Bordeaux mixture, and safe as a summer spray, I believe it is time we should experiment with it for celery blight, also. The new spray material is promising, to say the least.

## Sod Land for Vegetables

A Lockport, New York, reader says he has a piece of ground that has not been worked for some years and now is in grass. Can this land be plowed up in spring and used for potatoes, cabbage and tomatoes? Will the cutworms be liable to do much harm?

I would not hesitate to use the land, if otherwise suitable, for the crops named. Plow as early as possible in spring and work up as fine as possible with good harrows. Most likely there will be cutworms. They will not hurt your potatoes much. If you set early cabbages, they will need watching.

Place bits of green sod sprinkled with Paris green or arsenate of lead here and there over the newly-plowed ground (provided there are no chickens around) and poison the cutworms. Or plant a catch crop to protect the plants to be set later; some hills of beans, for instance. Then visit the patch early in the morning, find where plants have been cut down and hunt for the worm close by, perhaps just under the surface of the ground. Get him and crush him. Keep this up and clear the patch of the pest.

## A Melon-Worm

An Alabama reader complains about a worm having bored into his cantaloups and ruined half the crop. What to do to save the melons next year is the question. I have had no personal experience with this worm. We have a melon or two occasionally gnawed into by wireworms or similar scavengers, and some ruined by muskrats. Most likely the Alabama Experiment Station could give him some information. Reports of other readers, too, will be welcome. Late fall plowing is recommended as a remedy for wireworms. How it would work against this melon-worm, whatever it is, I am unable to say. Possibly this may be what is called the pickle-worm, which in western localities has been found destructive to cucumbers. It is difficult to control.

## Cresses Under Glass

For giving us a bit of green and something pungent to go with salads or be used for garnishing, and all this in the least possible length of time, I know of nothing that can beat the common garden cress. I sow it in boxes or flats, in large flower-pots, sometimes on the greenhouse bench. I raise my own seed, which is easily done, and sow often, just a little at a time. And possibly it may make good green stuff for chicks and hens in winter. At any rate, I am going to plant a few boxes just for that.

## Currants in the Garden

Why, yes! by all means have a few bushes in the garden. They bear year after year, and the fruit comes handy, fresh or canned or for sale. No better sort exists at present than President Wilder, a red-fruited currant, having long-stemmed clusters and large berries of good quality. The markets want them!

## Onion-Growing

Several readers again ask for information on onion-growing. If you wish to try the new onion culture, no time is to be lost. Get some Prizetaker seed at once and plant it in boxes in a sunny window or in the greenhouse for plants. If you expect to sow seed in open ground, secure seed of Yellow Danvers or Yellow Globe. Have the land well prepared and rich. You can't use too much fine manure or fertilizer. Land should be clean and mellow. Sow in drills fourteen or sixteen inches apart, preferably with a garden drill, using about five or six pounds of good seed to the acre, or one ounce to about three hundred and fifty feet of row. Use a hand wheel-hoe freely; weed early; thin where necessary. Pull when ripe. Cure and sell! That is the whole system in a nutshell.

## Raising Peanuts

An Oregon reader wants to raise peanuts for his own use. He has the "best of sand," but does not know whether to cover up the blossoms or not. Peanuts, like many other legumes, require a certain amount of lime, and lime applications on some soils are just as helpful for peanuts as they are for clovers. The practice is to hill the plants. By starting the plants early under glass, in paper pots or boxes, and, of course, selecting the very earliest variety, we can grow peanuts even in this climate, provided we have a warm piece of ground.

## Rose Mildew

A Mississippi lady reader has a white rose in her yard which mildews before the buds open and, therefore, fails to bloom. What is the remedy? The trouble may be the rose-leaf hopper, an insect which can be disposed of by spraying with whale-oil soap or kerosene emulsions. If it is mildew or any other form of fungous disease, spraying the young foliage with Bordeaux mixture, or possibly a diluted lime-sulphur solution offers some hope of relief.

## Growing Egg-Plants

Heat and rich soil are what the egg-plant wants, even as a seedling just started. Sow the seed in rich soil, during March, in a box or flat and place this in the warmest spot you have in the greenhouse or a hotbed. I often set the flats directly on the hot-water pipes. Then I give them a good sunny spot on the bench, and after a while transplant into paper boxes, ordinary small-sized flower-pots or into flats so that each plant has three or more inches of space each way, always giving richest loam and a warm location. When you have good plants to set out during early June in rich warm soil, it is easy to raise good egg-plants and plenty of them.

## Old Potatoes Made New

A Kentucky reader tells of a recipe he believes to have seen in our columns for putting old Irish potatoes through a process of immersing in some sort of liquid and making them, thereby, just like new early potatoes. The only process of that kind I know of is to put the potatoes in well-prepared ground in spring and harvest a crop of new potatoes in July or August. It is a good and fairly sure way if you do your part in the deal.

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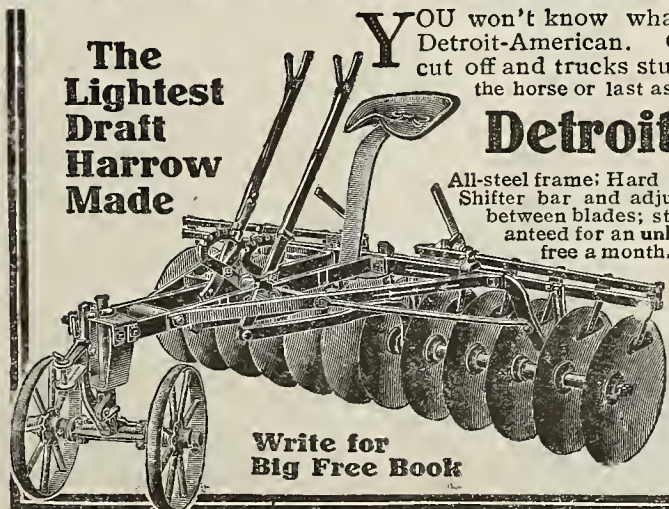
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## Garden and Orchard

### Nuggets of Horticultural Experience

Selected From the Practices and Observa-  
tion of Expert Fruit-Growers Assem-  
bled at Meeting of the New York  
State Fruit-Growers' Associa-  
tion, January 7th to 9th

**A**PPLE-ORCHARDS in sod have regularly  
given higher-colored fruit of su-  
perior keeping quality. But tilled  
orchards have given larger specimens,  
larger yields and far greater profits.  
This is the experience of the New York  
State Experiment Station at Geneva.

In many instances bridge grafting, so  
called, has been an unqualified success.  
The veteran, Luke Tower (Youngstown),  
told me of a tree with a trunk six inches  
in diameter, the bark of which had been  
gnawed off by sheep clear around, and  
three to five inches up and down. The  
insertion of half a dozen long scions to  
form a bridge over the injured spot  
saved the tree, and one can hardly tell  
where the injury was.

Chickweed, says Mr. Lowell, is not a  
bad cover crop for a vineyard, the best  
perhaps if you want any at all. It lives  
through fall, winter and spring; then  
dies during summer, and leaves the soil  
moist and mellow. No other weeds  
wanted, however!

The dead leaves on the ground in our  
orchards are the most important source  
of infection of apple scab. In every  
rain in early spring they are shooting  
millions of spores into the air. Get rid  
of the old leaves, by fall plowing or  
otherwise. That is Professor Whetzel's  
(Cornell University) advice.

For New York State the Baldwin apple  
still leads. Some growers would plant  
part Greenings; a few even Ben Davis.  
Baldwin fruit spot was bad the past sea-  
son. Unfortunately we know little about  
the cause and less about a remedy for it.

Apple aphids (lice) were plentiful last  
season. They do not come every year,  
but it is better to spray for them than  
run any risk. This is the advice of Pro-  
fessor Parrott (Geneva). Spray with  
tobacco-tea, whale-oil or kerosene emul-  
sions, etc. Apply under heavy pressure,  
before the leaves curl.

The Cumberland and Shenandoah Val-  
leys are coming to the front as apple-  
producing sections. They have doubled  
their output in the past few years. This  
natural fruit section is three hundred  
miles long by fifty miles wide. There is  
a great future ahead for it.

So long as apple-consumers have an  
idea that size and color guarantees qual-  
ity, says Doctor Jordan, Hood River  
Valley fruit will sell in preference to  
New York State fruit. Yet, the young  
man who can have a good piece of fruit  
land in the East, and goes West, needs  
education.

No spraying is done in Mr. Lowell's  
vineyard. He claims he never got his  
money back for spraying, and he gets as  
good grapes and as many without. The  
experience of many other growers, how-  
ever, does not support this view of the  
case.

Kainit is recommended as the best  
form of potash for grapes, and cheaper  
than muriate. But don't use it for pota-  
toes. The latter can't stand salt.

The worst competitor of the fruit-  
grower, says Professor Alwood, of the  
Department of Agriculture, Washington,  
D. C., is the poor fruit which gets into  
the market. A true statement, indeed.

Apple pomace from the cider-mills is  
now largely allowed to go to waste. It  
is not worth much for fertilizer. It  
could be used for making alcohol, vine-  
gar, etc.; and if good for nothing else,  
it is good for cattle food. This is  
Professor Alwood's claim. It may be  
put in silo. It is excellent to make milk.  
Apples contain twelve per cent of sugar,  
only half of which is extracted by hand  
presses; even the best power press leaves  
five per cent still in the pomace.

A pint bottle of fine cider, says Pro-  
fessor Alwood, sells at wholesale in New  
York City at twenty-five cents. A bushel  
of apples makes thirty-two pints of such  
cider, worth eight dollars. Is it worth  
handling?

Scraping the rough bark off fruit-  
trees and whitewashing the bodies of the  
trees are practices that do not seem to  
be as popular as they once were. Grow-  
ers and experts claim that "it does not  
pay."

The experts are not fully agreed on  
the advisability of the practice of de-  
horning old apple-trees for the purpose  
of easier spraying and fruit-gathering.  
Professor Hedrick (Geneva) claims it  
greatly injures the vitality of the trees,  
and a portion of the trees, at least, will  
be lost if limbs more than four inches  
thick are cut. Many growers, however,  
have cut the tops down with good results.  
It may be a choice between two evils.

The less pruned young trees are, the  
earlier they will fruit. Professor Hed-  
rick made this statement. A practical  
grower also advised to let the trees alone  
if you want them to fruit early.

To get dodder out of an alfalfa-patch,  
cut the alfalfa, cure, spray with kerosene  
and burn. That is Professor Stewart's  
remedy. Then be sure not to sow alfalfa  
or clover seed with dodder-seed in it.

Some one claims that by 1914 we will  
have reached the stage when production  
falls short of consumption, and imports  
exceed our exports. So stated by Doctor  
Webber, of Cornell.

A good yield of grapes, in the Chau-  
tauqua region, is one thousand eight-  
hundred baskets to the acre, or four tons;  
yet five and six tons are not uncommon,  
and up to nine or ten tons have been  
raised in some cases. T. GREINER.

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Does away with

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cracking at the ankle (like ordinary boots) an extra pure gum, no-crack ankle  
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compounded and vulcanized that it will rebound when it strikes a hard sub-  
stance rather than chip off, as the soles of an ordinary boot would do.

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tory rubber boot or shoe, ask for the Gold Cross line.  
It insures you quality and service.

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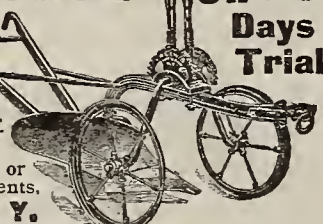
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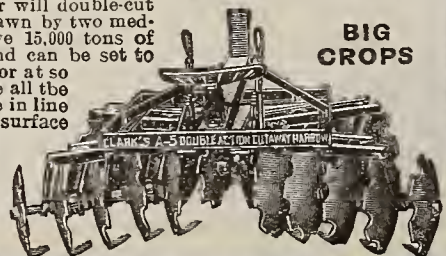
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That is only possible by use of skil-  
fully selected food that exactly fits the  
requirements of the body.

Poor fuel makes a poor fire and a  
poor fire is not a good steam producer.

"From not knowing how to select the  
right food to fit my needs, I suffered  
grievously for a long time from stomach  
troubles," writes a lady from a little  
town in Missouri.

"It seemed as if I would never be  
able to find out the sort of food that was  
best for me. Hardly anything that I  
could eat would stay on my stomach.  
Every attempt gave me heart-burn and  
filled my stomach with gas. I got  
thinner and thinner until I literally  
became a living skeleton and in time  
was compelled to keep to my bed.

"A few months ago I was persuaded to  
try Grape-Nuts food, and it had such  
good effect from the very beginning that  
I have kept up its use ever since. I was  
surprised at the ease with which I digested  
it. It proved to be just what I needed.

"All my unpleasant symptoms, the heart-  
burn, the inflated feeling which gave me  
so much pain disappeared. My weight  
gradually increased from 98 to 116 lbs.,  
my figure rounded out, my strength came  
back, and I am now able to do my house-  
work and enjoy it. Grape-Nuts did it."

A ten days trial will show anyone  
some facts about food.

Look in pkgs. for the little book, "The  
Road to Wellville." "There's a Reason."

Ever read the above letter? A new  
one appears from time to time. They  
are genuine, true, and full of human  
interest.



# Garden and Orchard

## A Cheap Transplanting Scheme

It is often desirable to give plants a little the start of the season, especially in the case of certain garden truck which it is desirable to force to early maturity. For several years, when the use of a hothouse or a hotbed was not to be had, we employed different methods for moving the plants, in a convenient vessel, from a sufficiently protected place at night to the sunlight of a window or the open air during the day. None of these schemes proved

In order to accomplish this successfully, all vegetable crops, as well as small fruits, will necessarily have to be planted in long rows, instead of in beds as has been the practice in most farm gardens. Once let that plan be adopted and my word for it few will ever go back to the old system of hand culture for even the finer vegetables.

Prepare your land by a heavy application of fine stable manure using the coarser strawy manure in mulching about the small fruits, such as gooseberries, currants, raspberries, etc. The earlier



Transplanting—"The end of the tin is slid under a can"

very satisfactory, as we had much difficulty, when transplanting, in keeping firmly around the roots of the plant the earth in which it had been growing, and transferring it along with the plant. The method here described, which we later adopted, completely remedies this.

We made a shallow box or tray, as it might be called, with a tight board bottom, measuring about eighteen by twenty-two inches and sides three inches high. The end and side pieces are one-inch, and the bottom half-inch stuff. One of the side pieces is removable, being held in place by short strips of hoop iron attached to the end pieces and bent so as to form a slot into which the side piece fits.

A number of tin cans are then obtained. One crate of the above dimensions will hold twenty cans standing upright. The tops and bottoms of these cans are removed by placing one end at a time upon a very hot stove until the solder is melted, when a light tap against the end will remove it. The remaining part of each can is then placed on end in the crate and filled with the kind of soil desired for the plants and the seeds planted. Only as many plants are allowed to grow in each can as are desired in one hill. The tray is set in the sun each day and carried under shelter at night.

When the time comes for the plants to be set out, a piece of thick tin eight inches long and about as wide as a can is secured. One end of this is rolled up a short distance, making it easier to handle. At each hill where the plants are to be set out a hole is made in the ground about as deep as the cans are high, but considerably wider. The loose board forming a side of the tray is then removed, and the end of the tin slid under a can. The can is then lifted from the crate into the hole in the ground, the piece of tin being held tight against the bottom of the can until it is set firmly in the hole. The earth is then filled in around the can, and the can removed by slowly slipping it out of the ground, at the same time gently pressing down on its contents, taking care not to injure any of the plants.

Plants may be reset in this way without their roots being disturbed in the least.

P. C. GROSE.

## Gardening in February

With the professional gardeners every season brings its regular routine, either preparatory or otherwise. The farmer with nothing more than a garden patch can well follow their forehanded example and get a lot of preliminary detail out of the way before the regular spring work takes all his time.

Begin now on the garden improvement you have promised yourself by laying out your garden plan so that the greater portion of the work in cultivation may be done by horse instead of by hand labor.

this mulching is done the better, to give a protection during the spring changes of alternate freezing and thawing, and a heavy application of such coarse strawy mulch will be found a wonderful help in the conservation of moisture to carry the fruit crops through a season of drought in ripening.

A good stock of bean-poles, brush for peas and stakes for tomatoes may be got on hand with very little extra labor while cutting the winter wood supply and thrown on top of the loads and drawn and stored ready for use so that when the busy season comes a trip to the woods for this purpose will not be necessary. The selection of garden and flower seeds and flowering bulbs should have been made by this time, so that a possible delayed consignment will not hold back planting or necessitate a trip to town to secure them.

These are only samples of the numerous odd jobs that will suggest themselves now that attention is directed to the matter. Get your garden work started before planting-time.

E. J. BROWNELL.

## Woody Plants From Cuttings

The growing of poplars, willows, currants and quite a list of ornamental plants from cuttings is a common practice, and one that is very certain to give good results when the right way of doing it is followed, and which is very certain to give poor results when other than the right way is followed. It is important, also, to have good, hard, well-ripened wood. By this I mean wood that is firm and that when cut with a knife shows but little pith, for although some wood that is not hard will grow, yet it seldom succeeds, even under the very best conditions.

We prefer cuttings with a diameter from a quarter of an inch up. Smaller wood may be good if firm; larger wood may be poor if the growth has been too rapid and is very pithy. Where there is a shortage of wood the cuttings need not be over eight inches or even six inches long; but where there is plenty of wood I should make them at least ten inches long. Sometimes cuttings of willows and poplars are made of wood an inch or more in diameter and several feet long. For convenience and economy in handling, especially on a large scale, the smaller cuttings are preferred; but if I wanted to grow a willow in the shortest possible time I should set a cutting, perhaps two inches in diameter, three feet in the ground, leaving perhaps three or four feet sticking out.

Cuttings may be safely grown upon any land that will produce a good crop of corn. The land should be firm and preferably autumn plowed. It is usually a bad plan to turn over a sod and plant cuttings on it, as the surface soil is left so loose that the cuttings dry out. In putting out the cuttings in the spring I think the best and quickest plan is to

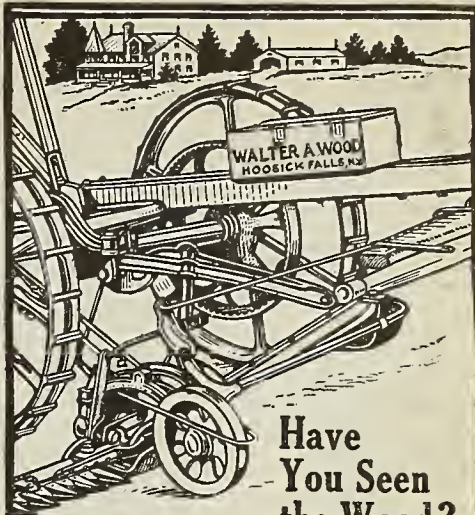
mark off the rows with a corn-marker and then if the soil is hard run a sub-soil plow to the depth of eight inches, loosening the soil so that the cuttings may be easily stuck into it. The cuttings should be pushed in at an angle of about forty-five degrees, leaving only one bud above the ground, and if that is partially buried, so much the better. The advantage of putting the cuttings in at an angle is that they are more firm in this position, and that when the ground settles it settles firmly with the cuttings and leaves them firm, while when they are set vertically the soil generally settles away from them and leaves them considerably more above the ground than when they were set. It is also more difficult to firm the soil about the base of the cuttings when they are set straight up, a point that is most important if the soil is very dry at the time the cuttings are planted. If it is wet, this is still important; but the work does not necessarily have to be done so thoroughly. I like to make up cuttings in autumn, but willows, poplars and many other woody plants may be grown from spring-made cuttings.

## Summer Cuttings

Cuttings of willows and poplars and many other woody plants may be rooted in summer by taking off twigs about eighteen inches long and sticking them in the moist soil near a lake or water-course or by keeping them very wet. All the leaves for about six inches from the top should remain on the cutting and all the rest should be removed. Of course such plants may also be rooted in the same way as geraniums in greenhouses and elsewhere.

SAMUEL B. GREEN.

The effects of liming soils are as follows: Sweetening acid soils, making plant-foods available, hard soils more friable, loose soils more compact. There is little difference as to the form of lime, except the finer, the better. Gas lime is good.



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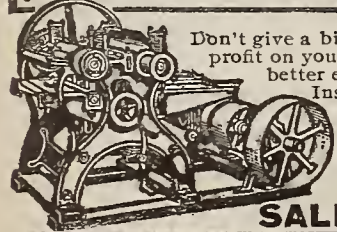
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# Live Stock and Dairy

## The Balanced Ration in Plain Words

IN A recent farm paper the editor criticized the agricultural writers and experiment stations for using technical terms in popular discussions of farm problems. He had reference particularly to the use of the terms "protein, carbohydrates and fats" in writing on feeding problems.

It is a fact that to a large number of readers the meaning of these terms is vague, yet we cannot well dispense with them because of the lack of any popular terms with which to replace them. Protein and carbohydrates particularly are collective terms and include under each heading a number of more or less similar substances. Thus, carbohydrates include starch, sugar, crude fiber, gums, etc., of the same general composition, but slightly different properties. The enumeration of all of them every time would be clumsy and bewildering. Nor can any one of those terms accurately stand for them all; so we are forced to borrow the word "carbohydrates" from the scientists.

A short discussion of the composition, sources and uses of the principal constituents of a food may assist some to a definite understanding of these terms. Of the three substances protein is the most important and costly; carbohydrates stand second, while fat is relatively the least important. I do not mean to imply that these are the only important components of a feed, but the others, water, ash, etc., are always present in sufficient quantity and need not be considered here.

Each of these substances is formed by the chemical union of several "elements" or separate substances. This union of elements may for our purposes be compared to the combining of flour, water, salt, etc., to make bread. Each separate substance is necessary to the whole material and has some special purpose. As a rule, though, one particular element gives the character to the resulting substance just as the flour determines the nature of bread.

In the case of protein, nitrogen is the element which is absolutely essential. Carbon, oxygen, hydrogen and sulphur are combined with it in varying proportions to form different kinds of protein.

In a pure state nitrogen is a gas and as such it makes up the greater proportion of the air, serving as a diluting substance for the oxygen, although it is not chemically combined with it. While nitrogen is absolutely essential to life, it is not available to animals as it exists in the air or in the soil. Plainly, then, it can only be made available to animals through the medium of plants. Plants take the nitrogen from the soil in the form of nitrates or—in the case of legumes—directly from the air through the medium of bacteria living upon the roots. When this nitrogen has been taken into the plant body it is combined in some way with the other elements mentioned before and the result is protein of one form or another. Nitrogen makes up about one sixth part by weight of the entire weight of it.

It is now in a form in which it can be used by animals, and all our protein comes directly from that formed in the plant cells—or indirectly from them, through the animals we eat, which live on plants.

Protein is absolutely necessary for the nutrition of the body, as it performs certain functions which no other material can perform. It is the source of all muscular and other tissue required in the growth and repair of the body, and it may, if necessary, act as a source of heat. It is possible for an animal to live for a considerable period on protein alone, but in practice this would be highly expensive, considering its cost as compared with the material that might partially replace it.

One very important use of protein not always recognized is that of stimulating milk secretion. Milk is formed by the breaking down of the cells of the milk-glands and, as these cells are largely nitrogenous, sufficient protein must be

supplied to make up that lost. It is also said that protein is the source of the sugar and fat in the milk. Not all the protein in the feed is available for milk-production. About one fourth is recovered in the milk, one half is required for maintenance of the body, while one fourth passes undigested into the manure.

Outside of dairying, the principal use of protein is as a flesh-former and as a balance-wheel, as it were, for the rest of the ration. Just how much more it does cannot be told certainly, but enough has been said to show that without it no ration is complete nor satisfactory.

The carbohydrates in food are of chief importance as sources of bodily heat and energy. They are composed of three elements—carbon, hydrogen and oxygen. The first is the fuel part and is the part that is chiefly characteristic. The most common occurrence of carbon is in the form of coal and the heat-producing ability may thus be easily seen.

Plants are again our only source of carbohydrates or, rather, our primary source. All plants, regardless of the species, make use of the carbon of the air, which they breathe in through the leaves as a gas, carbon dioxide, a little of which is always present in the air. The carbon is made to combine with the hydrogen and oxygen in the plant to form sugars which are carried through the plant and deposited either as starch or sugar or gums.

When taken into the body, that portion which is digestible is acted upon by the oxygen and "burned"—not, of course, burned as coal is, but consumed by a chemical process that produces the same thing as true burning—heat.

The carbohydrates are also a source of muscular energy.

While protein, also, contains carbon, and may apparently fulfill the functions of carbohydrates, the entire absence of the latter from a ration tends to overthrow the balance of the system. Yet it should be borne in mind that a deficiency of carbohydrates is a less serious matter than one of protein, and in calculating a ration this fact should be remembered. A proper balance should be the aim and neither substance should be deficient or very much in excess of requirements. The first will result in improper nourishment, which the latter causes needless waste of valuable food.

The third important constituent of food, fat, is very much like the carbohydrates in its composition and actions. It is too common to need any detailed description and we will briefly discuss its uses.

It acts in many respects as do the carbohydrates, being valuable for the production of heat and energy. For this purpose one pound of fat is equal to about two and one half pounds of starch or other carbohydrates. Contrary to popular opinion it is not the principal source of body fat nor is it especially valuable for that purpose. It need not make up a large proportion of a ration, yet a certain amount is beneficial.

Those three substances, protein, carbohydrates and fat, are found in all our feeds, but in different proportions. Thus cotton-seed meal is valuable mainly as a source of protein, while corn is chiefly a source of carbohydrates. When properly combined, a number of these materials form a "balanced ration," the three substances being present in the ratio best suited to the needs of the animal as worked out by tests. This ratio is not the same for all stock. Thus the high-producing dairy cow requires a ration entirely different from that of a fattening steer, while the hard-working Percheron mare requires different feeding from the growing colt in the pasture.

Every farmer should make a study of this problem, in order to make his farm crops do the greatest good, and if this article shall in any way be of assistance in this its purpose will have been accomplished.

JOHN DANIEL.

## How to Make Butter "Come"

THE article on the reason "Why Butter Won't 'Come,'" in FARM AND FIRESIDE for January 10th, was an interesting and accurate summary; but the matter of change of feed deserved a little more extended notice. In winter we are quite in the habit of feeding small potatoes, apples, turnips, cabbage-leaves, etc., to afford the cows something in the way of "green stuff;" any one of these may work mischief with the cream for butter-making, not with all cows, but with some one of the herd. In our case we have had two cows thus affected if they were allowed to eat apples. The butter just would not come, though churned for two or three days.

For a number of years we have kept but one cow, making our own butter, as well as supplying one or two families with daily milk. We use three pints of milk per day for butter, using an average of three pounds per week. The cow is a Jersey and has been milked twice a day for more than four years. With that long interval since she was fresh, one would naturally expect trouble in getting butter to come, yet we have no trouble in getting it inside of half an hour, more frequently from fifteen to twenty minutes.

The cow has clover-hay and corn-fodder when we can get it, at other times she has to put up with timothy or mixed hay. The grain ration she does best on is ground corn and oats. For green stuff she gets potato and apple peelings, pumpkins or turnips in limited quantities with occasional feeds of carrots or parsnips. There are two things we have to look out for, too many apples and a chance to eat the dry maple leaves which we sometimes use for bedding, and of which she is very fond. These make the butter long in coming and of inferior quality.

The milk is strained through cheesecloth into shallow pans; these are set on the stove with an asbestos mat under them to keep the milk from scorching. As soon as the cream comes to the surface in little crinkles, the pans are removed, allowed to cool and set away in a cupboard to stand thirty-six to forty hours (this, of course, is winter, not summer treatment). The cream is then skimmed into a gallon jar. When it is full we set it on the back of the range to warm up and ripen, stirring well once or twice during the process. If we have a little sour milk or buttermilk on hand we stir it into the cream to hasten the souring, or ripening; if not, we get along just as well by warming the cream and setting it aside for a day, before churning. We never put any fresh cream into our cream-jar the day we intend to churn, as that tends to make white specks in the butter; and, finally, we use an old-fashioned stone dash churn.

As soon as grass starts in spring the milk-flow gains wonderfully, and butter comes readily without it being necessary to scald the milk. We believe scalding the milk will nearly always remedy the difficulties encountered in winter butter-making.

Of course proper feeding and watering, as well as comfortable quarters and good care, is assumed to be the cow's portion.

MRS. J. E. MORSE.

## Breaking a Biter

AN OHIO reader writes: "I have a horse that would be very valuable if it was not for his biting habit. I have put him on his side a number of times and kept him there until I thought he was perfectly subdued, rattled bells and pans over him, fired a revolver over him. I can handle him, but I have to watch him; he grabs quick as a cat."

That seems to imply the horse is gentle in other respects. Proceed as follows:

Keep him, if possible, in such position that you can approach him from in front without entering his stall. When you visit him be very quiet and gentle and feed him with small apples, lumps of sugar or something of the sort and continue as long as he behaves. Meanwhile be prepared for treachery. Have a short whip at hand, but concealed from his view, and the moment he tries to bite strike him sharply around the nose. Strike hard so as to punish severely, but do not keep on striking—one or two blows are enough. Stand quietly by until his mind has taken in the situation a little, then resume your feeding. Repeat this treatment as often as you can, remembering that your success will depend largely upon the shortness of the lessons and their frequent repetition. It may be some days before he will show much improvement, but if the treatment is perseveringly followed up he will see what the lesson means.

The value of this treatment lies in the fact that the horse by behaving properly not only receives immunity from punishment, but a reward besides, while misconduct invariably brings a prompt and sharp reproof.

The absolute cure of so deep-seated a vice cannot be expected for some time, but a marked improvement should soon be shown. Remember that time is always necessary for the cure of such things and that all the patience the trainer can command is usually required.

Do not feed your horse too stimulating a diet; and it is important that he be used every day. Idleness causes nervous irritability and always aggravates a vice.

DAVID BUFFUM.



# TOO BAD



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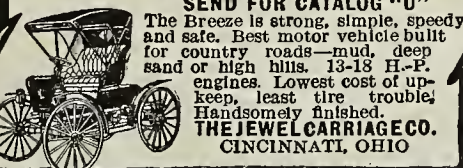
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# Live Stock and Dairy

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A SERVICEABLE, hand-power horse-clipping-machine may be bought for from five dollars up to twenty-five dollars—a very satisfactory one for the former price, though, where there are several horses to be clipped, it is better to get a higher-priced one.

It takes two men to run the ordinary hand-power clipping-machine. The work can be done by the regular farm help, and there are usually off days in the spring when not much else can be done, so that very little time need be lost from the regular field work.

Farmers do not appear to appreciate the advantages of clipping the horses. In the spring, when hard work begins for the farm horse, the coat of hair is long, coarse and heavy. Nature furnishes it to serve the same purpose for the animal that the fur coat does for its owner. When the horse is put to work, the long hair is at once a burden, and

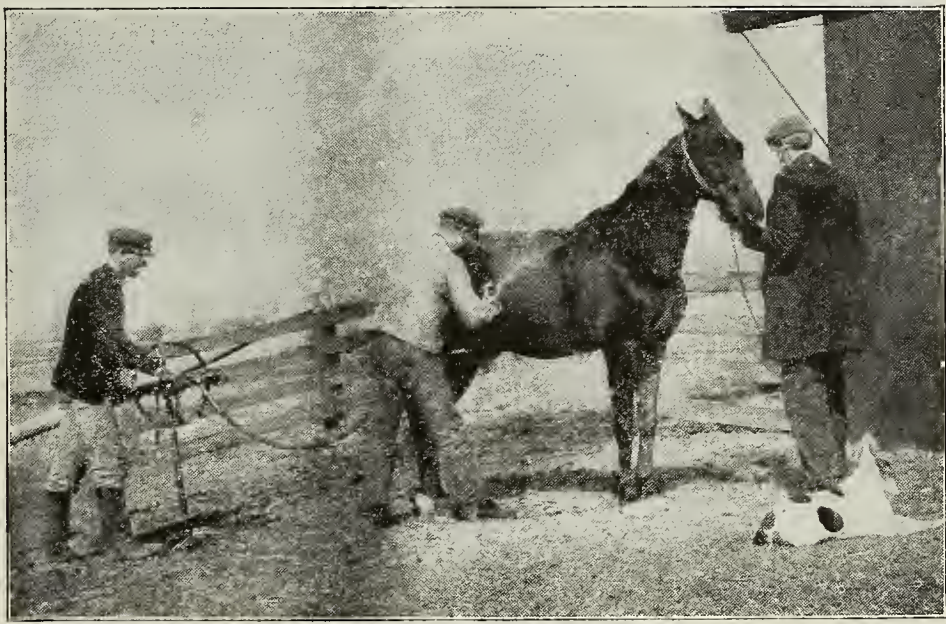
shearing attachment may be had for the machine at small additional cost, which does the shearing at a great saving in labor and cost. The machine clips closer than the hand shears. Some claim that the wool saved by the machine will average a pound to the sheep.

Where a gasoline-engine is used a power attachment may be had for the machine, and thus all the hard work in running it, which after all is not so very hard, may be avoided. M. G. RAMBO.

## First Treatment for Shying

A VIRGINIA subscriber has a valuable five-year-old, a good saddler and driver. He is very shy in passing objects on the side of or in the road and sometimes turns entirely around and starts back.

First of all use the horse and use him plentifully every day. Constant, unremitting but not unduly harsh use often



A Little Springtime Barber Work

the animal becomes covered with sweat upon even light exercise of a warm spring day.

When this heavy coat becomes wet, it takes it a long time to dry. The spring nights are often quite cold, in strong contrast with the temperature during the day. Naturally the thick wet coat which the animal is forced to wear at night, after perspiring freely at work, subjects it to colds and pneumonia. Many a good horse has been injured in this way, not by overwork when it was soft from the lack of exercise, but by having to stand through a long cold night in its wet winter overcoat. It is as though you should be forced to sleep between wet blankets.

With this heavy coat removed by the clippers, the horse does not get so warm when at work, perspires much less, and the moisture evaporates from its hair much more rapidly. When a horse perspires copiously its vitality is greatly lowered, and it is naturally much less able to resist the attacks of those ailments which horses are subject to in the spring. The clipped horse can stand more and harder work than the one in long hair, just as a man can chop more wood on a warm day in his shirt sleeves.

The long hair, also, becomes more or less filthy, no matter how carefully the horse may be groomed. Many have the idea that the state of the blood is bad when the skin of the horse gets out of condition toward the end of winter. They endeavor to correct the condition by the use of tonics when in fact the trouble is an ill-cared-for skin.

Besides, the task of caring for the shedding work-horse is a disagreeable job. The process of shedding covers several weeks, and every one knows how unpleasant it is to get covered with discarded horse-hairs in tending and working with the horses. Principally for this reason the liverymen and city horsemen adopted clipping long ago. The farmer is supposed in some quarters not to have as subtle sensibilities as city folks; but that, like many notions of urban people concerning ruralites, is a heresy. The farmer philosophically endures many distasteful things simply because he does not know how to avoid them economically. As he learns that he can enjoy his breakfast food in the springtime without horse-hair accompaniments by the outlay of a few dollars, he will, no doubt, avail himself of the opportunity, and especially so when he discovers the fact that the possession of a good clipping-machine is a paying investment otherwise. Where sheep are kept on the farm, a

works wonders. If he is, as is probable, of a nervous temperament, reduce his ration of oats or, for a while, cut them out altogether and feed corn instead.

For the shying proceed exactly as if he was a colt, and introduce him carefully to every object that he fears. Make him understand two things thoroughly: First, that the object will not hurt him and, second, that he must pass it in any event. This, without going into minute details, is what to do, and if the fear is genuine and not assumed it should very soon effect a cure.

In applying this treatment remember that it is all of it important, and that half of it without the other half will do little good.

If the fear is assumed (as it sometimes is), some additional treatment may be necessary. But without seeing the horse I am unable to judge of this matter and I am reluctant to prescribe any harsher measures till these have been thoroughly tried. Follow up the treatment persistently and faithfully for a fortnight and then report to me, and if the horse is not well on toward a cure, as I feel confident he will be, I will give further directions. DAVID BUFFUM.



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**70,000 Americans** will enter and make their homes in Western Canada this year. 1,009 produced another large crop of wheat, oats and barley, in addition to which the cattle exports was an immense item.

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## Live Stock and Dairy

### The Grade for the Common Farmer

**D**OES it pay? Sooner or later in all business enterprises this question must be settled.

Does the breeding and feeding of a pure-bred dairy herd pay? This each man must consider according to his location, the capital that he has to invest and his general knowledge and understanding of the business.

The pure-bred business is a specialized business. It requires a watchful care, thorough knowledge of the heredity of the cattle in your herd, constant study in breeding, a better understanding of the wants of the community in which you are located and plenty of money to invest in new blood at any time the demands of the herd call for it.

Records must be kept, and a daily record of each item be entered; in fact, I might say you must ever be ready with pencil and paper to mark down dates of service, birth, etc. All this must be kept right, so that if called upon you can swear to your record. Even an application for registry papers amounts to an oath.

You must keep posted on the activities of your breeders' association. You must always be ready with a pen, ink and paper, and always cheerfully reply to all inquiring letters and postal-cards received, and at times this alone will prove quite burdensome to the man on the farm.

Your sires must always be selected with the greatest of care and judgment, and even then breeding requirements may force you to invest in a better one than you now own, although you may be compelled to dispose of your present high-priced sire for much less than he cost you. This alone would strongly test the nerve of many a successful farmer. Then again it is an undoubted fact that all pure-bred animals are more susceptible to disease than the more hardy grades that originated from the same breed; this renders them a more hazardous investment than grades.

All of us, by a little self-searching, can tell whether or not we are strict truth-tellers or whether we are individually given to misrepresentation or evasion of the cold, straight facts. All I can say to you if you are of this class is "keep your hands off" of the business of breeding pure-bred cattle. If you make one mistake and go wrong, your occupation and business is ruined and you have a herd of cattle on your hands that no breeder with a reputation would

Have you noticed the answers to inquiries by Mr. David Buffum on horse management, and Prof. Van Pelt on dairying? Prof. Van Pelt is the expert of the Iowa State Dairy Commission. Wherever horsemen gather, Mr. Buffum is known as a horse expert. We have experts on sheep, on soil management and other lines ready to answer your queries and to solve your problems. Give full details when you write.

dare to buy, even though he was satisfied that they were good individuals and worth the money you were asking for them. The discriminating buyer will study the breeder's pedigree fully as closely as he will that of the animal.

With grades, on the other hand, a man can start on a very little capital to lay the foundation for a successful business, and, with the occasional purchase of a well-bred sire, he will be able by careful feeding and judicious selection to build up a good working herd of cows. By raising all of the best heifers that come from good cows and feeding them so that they will be large enough to come to profit in the dairy by the time they are twenty-six to thirty months of age, he may expand the business as time goes on. If he will watch all the details of the business and use good judgment in selecting his first breeding bull to correct the deformities and deficiencies that may exist in the cows, and not be constantly trying new combinations, he will have in a few generations as good cows for all practical purposes as the pure-breds from which the grades were derived.

W. MILTON KELLY.

### Calving-Time and After

**S**EVERAL of the most deadly calf ills originate in infections of the navel before it heals. The utmost cleanliness at calving-time, coupled with disinfection, is therefore necessary. The calf should be received on clean straw, and the navel-string, after being tied with cord that has been thoroughly saturated with disinfectant, should also be covered with disinfectant.

When the calf is taken away at once, as is the practice in some dairies, it must be rubbed thoroughly until it is quite dry, with its blood circulating vigorously. Care must be taken to see that the muzzle is free of membranes and the mouth should be cleared of mucus if necessary. Most farmers leave the calf with the cow till at least it has been licked dry. Some sprinkle a little salt over the calf; it is

figured that this makes the cow thirsty so that she drinks readily which might not always be the case otherwise.

For a couple of days after calving the cow will get thin drinks of meal and water and good sweet hay. It is a great mistake to give high feeding at that time.

Sometimes a cow freshens so strongly that it is necessary to milk her before calving. It is believed that cows milked before calving are less liable to fall off in milking after calving.

Keep the cow on low but sufficient diet, let her be free to take exercise, and be careful that the bowels are free.

The first feed given to the calf is the milk of its own dam or of a cow that calved the same day. The first milk is quite different from ordinary milk and is Nature's special provision for the calf. If the cow should die in calving, an efficient imitation of first milk can be made by beating up a raw egg in half a pint of milk. For the first week the calf should get the milk of its dam, for although some dairymen think that after the fifth milking the milk is fit for dairy purposes, the milk is often not absolutely normal for five or six days after calving. The usual test of fitness is to boil the milk. If it will boil without curdling it is fit for dairy purposes.

Many dairymen put the calf on skim-milk within two or three weeks; but my personal choice is to feed whole milk until the calf is a month old. Whenever the change is made, it ought to be gradual with each increase of separated milk a corresponding quantity of new milk being withdrawn. With the first introduction of separated milk some addition must be made to the feed to compensate for the cream that is withdrawn; the food most commonly used is linseed (oil-meal) which may be boiled or steamed and added to the separated milk, commencing with a tablespoonful or so and working up to half a pound a day by the time the new milk is withdrawn entirely. Two parts each of oatmeal and corn-meal boiled together with one part of linseed-meal has also proved effective.

W. R. GILBERT.

### New-Comers in Zero Weather

**H**ow many farmers find it hard to save the early lambs? No matter how good the shed, the lambs born on a severe cold night get a chill and, unless every precaution is taken, are lost. Get them dry quickly. Wrap up and bring to the kitchen fire. If they will not suck at once, we milk the mother and add a few drops of whisky to her milk and feed with a spoon.

In this way we have saved several that would otherwise have perished. We find a great many of the ewes will not allow the lambs to suck at first, and have to be held until Mr. Lambkin gets strong enough to assert his rights.

Ever go out on a bitter cold morning and find a young calf shivering and sniffing with the cold? Just try milking about two thirds of a pint of milk from the mother, add a teaspoonful of whisky and feed the calf with teaspoon. Then blanket. It works wonders. Warmth inside and out young things must have.

It's pretty rough to get up at midnight and hunt lantern, tin cup and spoon, and go to feed the new-born lambs and calves, but it pays in dollars and cents.

C. A. THOMPSON.

### Mare With Queer Cravings

**A** SUBSCRIBER at Boyce, Louisiana, has a seven-year-old mare that does not thrive and has curious cravings, even biting wood. She is getting thirty to forty ears of corn daily, besides hay.

What she probably needs most is a run at grass. If that is not practicable feed her, as soon as the season will permit, on a strictly green diet. Corn-leaves, with the upper and more tender part of the stalk, are perhaps best, but clover or alfalfa or grain cut green are all good. Give her all she will eat of this green forage.

For immediate treatment give her three feeds, on alternate days, of bran and meal and fine salt. Have this mixture as salty as she will eat it—teaspoonful of salt at a feed if possible. Then keep a lump of rock salt in her manger. For a part of her rations of corn on the ear substitute bran and meal into which mix a pint of molasses. Feed this twice a day and keep it up for a month or two. The corn on the ear is a better feed for a regular thing, but the molasses will help get her back into condition.

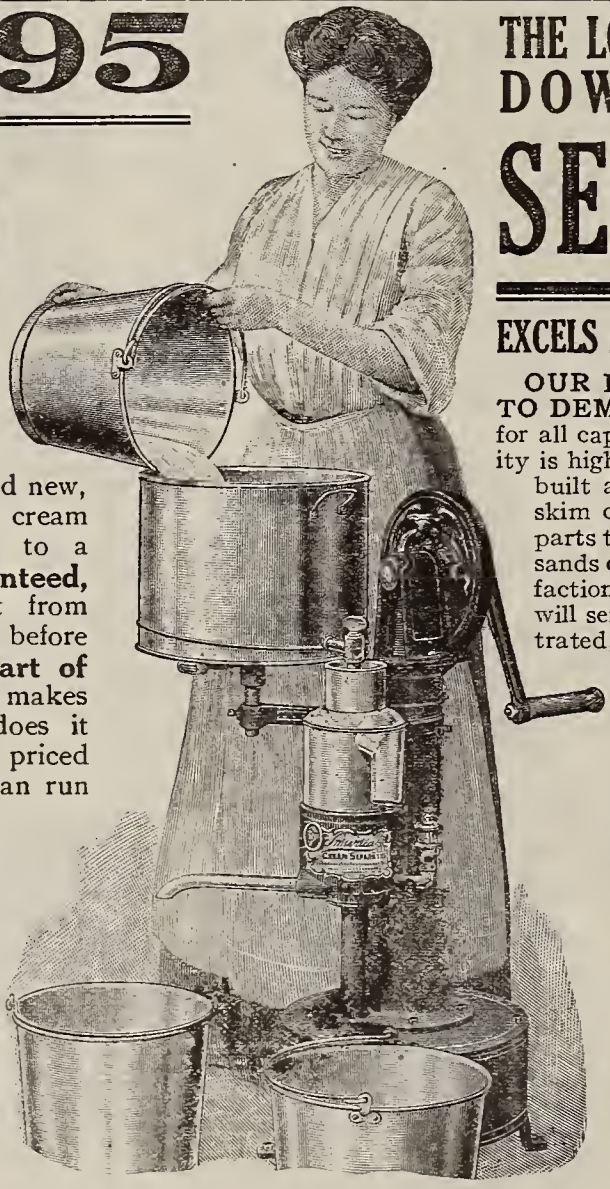
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# Practical Poultry-Raising

## Fertile Eggs

**T**O SECURE the best of fertility in eggs it is necessary to have strong healthy breeding stock with vigor and strong constitution. Birds out of condition, either from inbreeding, sickness, improper food or unsanitary surroundings, will not produce fertile eggs. Neither will hens that are over-fat.

The number of hens to mate to a male varies according to the breed and the conditions under which they are kept. Males of the smaller breeds can be mated to more females than those of the heavier breeds. Do not allow more than one male in the pen at the same time. I find that the use of males alternately is a good plan to get the best fertility in the eggs. It is best to

Never keep eggs in a damp cellar nor near a fire. If possible, they should be kept where the air is dry and cool, although the wrapping helps to overcome unfavorable conditions. Eggs are safe in a temperature of fifty to sixty degrees. Lower temperatures injure them, higher sometimes start them toward hatching.

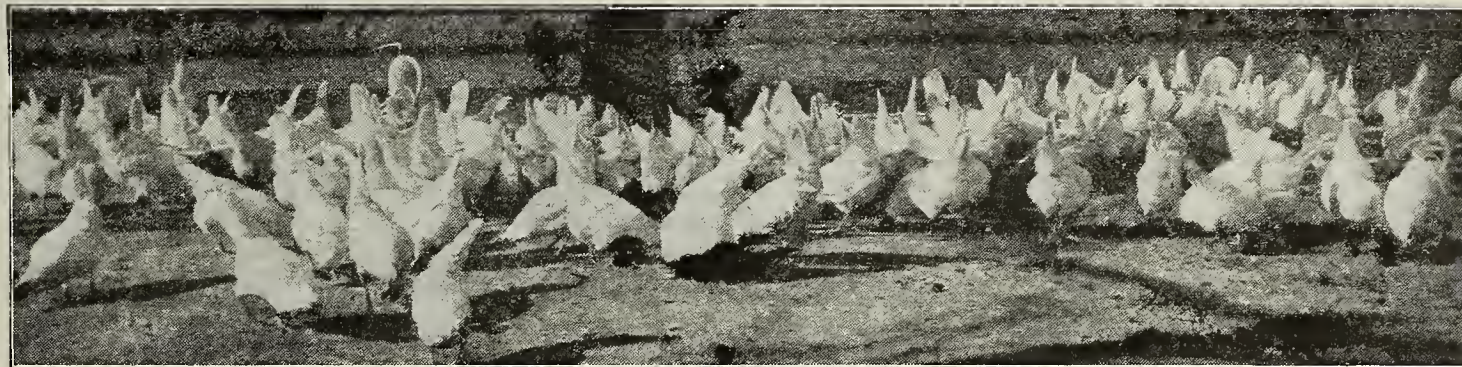
Be careful with shipped eggs. Do not unpack as soon as they arrive, but, instead, see that the covering is secure, then invert the basket and let it remain for several hours or overnight. Never shake an egg to find if it will rattle. A perfectly good egg will often rattle a little after it has been packed for several days. But after being "tested" by the shaking process it will be of little value.

## Breaking the Brooding Hen

**I**N THE attempt to break her from her natural desire to brood, the setting hen has been the recipient of more senseless cruelty than has ever been perpetrated upon his enemy by the most vindictive savage.

She has been starved for a week or more at a time, stood in a few inches of water for several days, frightened to prostration by attaching a red flag to her tail, drowned to unconsciousness by ducking in cold water and beaten without mercy. That her sorrows have not enlisted its sympathy is a standing reproach to the Society for the Prevention of Cruelty to Animals.

That is the wrong system. Less violent methods get results, easily and mer-



"Looks Good to Me"

mate up breeding-pens early. By doing this the birds become acquainted and are friendly when eggs are wanted for hatching. After the pens are mated it is a very good plan to test the eggs and if they are not fertile look about for the cause and remedy it.

Fowls on free range produce a greater percentage of strongly fertilized eggs than those kept in close confinement, other things being equal. Breeding stock must be kept busy. Give them a large run if possible; at least give them a scratching-shed.

Another important item in securing fertile eggs is proper feeding. Too stimulating foods that will force the breeders should be avoided, as they cause weaker germs. I have had the best results by feeding a grain ration of wheat, oats, buckwheat, etc., scattered in the litter mornings. At noon I give them a mash and at night principally corn. Green food, in the form of cabbage, turnips, beets, alfalfa, clover or ensilage, is always kept on hand. For their animal feed I find green cut bone the best.

Fresh air is an important factor in obtaining fertile eggs. Keep your poultry-houses well aired during the day and do not keep them tightly closed at night. Muslin-covered windows, of course, solve the ventilation problem entirely. Care should be taken to keep the houses in good sanitary condition and free from lice.

When we have taken precautions in breeding, feeding and housing, the resulting fertile eggs cannot be handled too carefully. I make it a practice to gather my eggs two or three times daily during the hatching season so they will not be chilled or otherwise injured. Above all things keep your nests clean, for this will save a lot of dirty eggs and I would not give much for an egg that has been washed for hatching purposes. I reject all imperfect, bloody, small and over-large eggs and only save those of uniform size and shape. Eggs that are saved for hatching purposes should be turned daily, for if they are not the yolks will adhere to the shell, in which case the delicate membrane near the germ may be ruptured when the eggs are turned. From ten to fifteen days is the longest they should be kept; I have had eggs three or four weeks old hatch fairly well, but the chicks were not very strong.

A. E. VANDERVORT.

## Care Before the Hatch

**I**N COLD weather be careful that all eggs intended for hatching are gathered before they have time to chill. Wrap each egg in paper and write the date on it where it can be seen without unwrapping the egg.

Place in boxes, one layer deep, and cover closely to exclude the air. They must not be kept too long, however. Turn the eggs carefully every day or so, without removing the wrappings, until placed for hatching. The turning keeps the yolks from settling to one side. This rule should be followed at all seasons with all kinds of eggs that are wanted for hatching.

It is best to place eggs for hatching as soon as possible after they are laid. But when old eggs, even, are properly cared for, a much larger per cent will hatch than when handled in the usual manner. Eggs should never be shipped long distances in very hot weather nor extremely cold weather, for obvious reasons. Hen's eggs should never be kept over sixteen days, and if they are to be placed in an incubator they should not be over one week. Duck-eggs will not hatch well when over a week old. Turkey and goose eggs will keep for twenty-one days. We have kept both turkey and goose eggs for four weeks and then got good hatches, but one generally should not risk keeping the eggs so long. Sometimes it cannot be avoided. Since it is necessary to hatch both geese and turkeys by natural methods, we have to wait until the hens get good and ready to set. Ours are never in a hurry while the weather is cool. Turkey-hens should hatch their own eggs.

ANNA WADE GALLIGHER.

## Feed the Poultry Skim-Milk

**W**ITH the great number of creameries and skimming stations scattered about the country there is very little reason, if the farmer keeps cows, why he should not have plenty of skim-milk to feed to the chicks and pigs. Many poultrymen and farmers have not thought seriously of its value to the poultry.

After the milk has been skimmed there is left the best part of the milk, as far as poultry feed is concerned, the nitrogenous elements. This material is easily digested and can be substituted for part of the grain ration. However, a varied ration must be fed, with the usual corn, wheat middlings, bone and green food, in order to obtain the best results, but the quantity of these can be cut. The skim-milk is especially good for young, growing chicks and keeps them gaining weight fast.

The milk should be fed with the mash, when the mash is to be eaten within a few hours of the time that it is mixed. Skim-milk when fed in open pans should be given carefully; the pans should be cleaned often and not be set in the sun, as heat causes the milk to sour quicker.

Sweet milk is not as good to feed old fowls as sour; curdled milk once a week is good. Have plenty of coarse feed to go with milk fed to fowls; when that is seen to there is not likely to be any harm in feeding it unless the feeding is overdone. The first sign of a disorder is likely to be a watery bowel discharge, and when this is noticed milk should be discontinued for a time.

I have seen a large flock of fowls in Michigan that were raised this year mainly on skim-milk. The dairyman who had them claimed he could make more feeding the skim-milk to his poultry than to his hogs. He had worked up a fancy trade for milk-fed broilers and received a handsome price for them all the season, and now has as fine a looking flock as could be wished.

EDWY B. REID.

**\$7.55** Buys the Best  
140-Egg  
Incubator



Ever Made

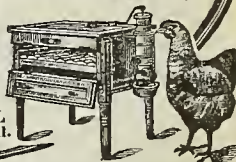
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was offered to the poultry public when perfected, not before. Inexperienced can start with Lee's twenty years' successful work. Lee's "Chicken Talk," a book written by Mr. Lee himself, and his Incubator and Brooder catalogue are ready to mail. Both free. Send for them to-day. There is no poultryman's need omitted from this catalog. It is a complete showing of the things that made Mr. Lee a successful poultry raiser.  
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Twice as many by feeding green cut bone.  
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Write For Low Prices On Larger Sizes—Freight Prepaid



J. W. Miller

**I** AM quoting lower prices on Ideal Incubators, delivered, this year than I ever thought I could possibly offer you. Yet my Ideals are better this year than ever before. And this is why: They are metal-covered all around, front, back, sides, top and bottom, encased in best grade, 28 gauge galvanized iron. That means that the Ideal is the absolutely safe incubator; also, that it holds the heat as no other incubator can; insures an even temperature and saves oil.

I can sell just 20,000 of the 120-egg size at this price, freight paid. So you had better write me now. The 20,000 will be cleaned out in a few weeks at this startling price. I can't make more at that figure this year. I planned this big scoop on the incubator business months ago. No one else could have arranged the cost of production as I arranged it, owing to my scoop on materials, labor and manufacturing facilities. If you are to be one of the 20,000 to get this bargain, write me now. I'll send my big poultry book free—the best published, and my cut prices and freight-paid offer on all sizes of my

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Never before have quality hatchers been sold for prices that even approach mine—and remember, I pay the freight. And the machine I'll send will be complete, ready to use; no extras to buy. Years of service have proved the Ideals to be record-breaking hatchers; and the new model, encased in galvanized iron, sets a still higher standard of perfection. Made by experts, of the best materials money can buy; absolutely safe; automatic regulator; guaranteed to hold even temperature during entire hatch; automatic ventilation—the simplest to operate; most durable and best finished.

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contains my 30 years' experience as a poultryman; over 20 full-page illustrations of Standard-Bred Poultry, all breeds; other fine cuts; all printed on best of paper. Tells what Ideal Incubators and Brooders have done for others and what they are guaranteed to do for you.

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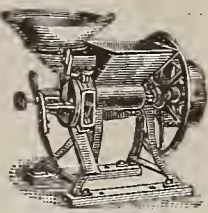
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Never found wanting. Don't experiment. Countless thousands of other poultry-raisers have made a success with

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Incubator and Brooder. Anybody can operate them and make money. Let us prove it to you. Booklet, "Proper Care and Feeding of Chicks, Ducks, Turkeys," 10c. Poultry paper, 1 year, 25c. Free Catalogue. Des Moines Incubator Co., 61 2nd St., Des Moines, Ia.

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It gives the reason for the excessive "drying" of eggs under artificial incubation. It tells how to hatch big—strong—healthy chicks—that grow and thrive. Tells why so many eggs fail to hatch.

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## Poultry-Raising

### Keep Geese

FARMERS, everywhere, should keep more geese. We have had them for a number of years and find they are easier to raise than either ducks or turkeys. They are profitable, too, although the price paid here rarely exceeds ten cents a pound. Their principal ration during the summer and fall months is grass and weeds. After the goslings get a start they require very little grain food until they are more than half grown, providing there is plenty of pasture. Seven or eight large geese will consume as much pasture as one cow. But they will eat weeds and coarse grass that a cow would never touch. Thistles and golden-rod are about the only weeds they refuse. They are equal to sheep for cleaning up weeds, and they enrich the soil quite as rapidly as do sheep. They are close croppers of grass, but are less injurious to tender vegetation than sheep. And, besides, they do not make the objectionable paths that sheep do.

The reason why geese are classed with sheep here is because they are grazers in the truest sense of the term and therefore resemble cattle or sheep more than fowls. They will thrive upon any feed suitable for cattle, sheep or hogs. There is a time-worn prejudice against geese, but they are more desirable in every way than ducks.

It is not a good plan to allow geese to roam at will; they are sure to be destructive to growing crops, especially corn. They will not thrive in close confinement, but they can be handled the same as sheep. A fence that will turn sheep will turn geese. The old birds will sometimes fly over a fence, but not often. When they acquire this habit one wing should be cropped. The large varieties of geese, such as the Toulouse and Embden, rarely attempt to rise from the ground.

We raise the Toulouse. They make less noise than other varieties, and we believe them the best general-purpose goose in existence. They are very easily raised, being strong and vigorous from the start. A Toulouse goose is usually at her best when from two to six years old. It is not at all unusual for geese to live and thrive for a much longer period, but we never keep one over six years. When a good flock is once established, it is best to sell off the young stock every year, unless old and young are kept separate. The eggs of young geese seldom hatch well. If they hatch at all, the goslings are nearly always small and weakly.

Goose-eggs require from twenty-eight to thirty-two days to incubate. They should be hatched under large chicken-hens. The goslings will pip the shells some time before they are ready to emerge, and nearly always they require some help. The shell and lining of goose-eggs are very strong, so as soon as they are pipped we pick off a little of the shell and make a small opening in the lining, if it is still intact. Be very careful in this. A very small opening to admit air is all that is necessary. This strengthens the little fellows and they will usually come out within twenty-four hours; if they are not hatched at the end of this time, a little more of the shell should be removed.

It is about time for the geese to begin laying, but it is not advisable to set the first eggs, because they are very apt to be chilled before they are gathered. April is soon enough to begin setting goose-eggs. However, if properly han-

dled, the eggs may be saved for several weeks before being set. Grass is an important factor in rearing goslings, and if they are hatched before spring vegetation starts, a substitute has to be provided. A good ration for laying, before grass comes, is cut clover steamed and mixed with corn-meal and bran.

ANNA WADE GALLIGHER.

### The New Arrivals

THE first care the young chick requires is that the temperature in the incubator be gradually reduced to about one hundred and one degrees when the chicks are forty-eight hours old and ready to be removed to the brooder, which should have been warmed up to about one hundred degrees and running safely. Before placing the chicks into their wooden mother cover the floor of the brooder with any good scratching material, such as fine hay-seed, cut clover, etc. I put about an inch of sand in the nursery of the brooder, which makes excellent grit. Put a little grit among the litter, also. Arrange a warm blanket in a box, basket or pail, so it will cover the bottom and sides and fold over the top, and in this remove the little chicks to the brooder. The best time to transfer them is at noon, as they will have all the time they need from then until dark to fill up on grit, which I find is all they require for the first day, and they will be pretty well satisfied with their day's work at bedtime. By placing them in the brooder at noon you will also have a chance to attend to the rising temperature of the brooder, incident to the added heat of the chicks, without watching it with a lantern. The next morning place a fountain of fresh water, slightly warmed, in the nursery and sprinkle a little chick food of good quality among the litter.

Keep the chicks penned in the brooder for two or three days and see that they know how to get under the hover; they will very soon learn where to go when they get cold. See that they all go under the hover the first night and that they are warm enough. Always have a little ventilation. Feed often, but give only what they will eat up clean each time. After they are about three days old they may be let out of the brooder if the weather is favorable. After they are three weeks old they may be fed larger grains, such as wheat, cracked corn, buckwheat, etc. A supply of clean, fresh water will save a lot of disease. If they do not have free range supply them with green and animal food and, of course, grit.

Give your brooder a cleaning every day if possible and give it a good airing each time. It will be necessary, of course, to trim the wick and fill the lamp every day for best results.

Just remember how good the sun feels on you when you are deprived of it for any length of time and recollect that it feels just as good to the chicks; so don't put your brooder in the shade, but in a good sunny place.

A. E. V.

### Poultry Facts for February

After a hen is two years old you are not very sure of getting fertile eggs from her.

Handle eggs for setting very carefully. Any shaking is apt to spoil them for fertility.

Out of doors one rooster to twenty-five or thirty hens is all right. In confinement lessen the number at least one third.

Mate your birds up for hatching eggs at least a week before you begin to save any for this purpose, to be sure they are fertile.

Give hens that are in training for eggs for hatching plenty of exercise. If you can, let them out of doors a while every day, and by all means let them have a place to dig all they want to.

To make sure of fertile eggs, feed the hens well. Poor food, poor eggs as a rule. Corn, wheat, buckwheat, bran, vegetables and cut clover or grass, and now and then a change to oats is a good diet.

To know if eggs are fertile, take them into a dark room. Hold them in the hand, one end toward you, the other toward a light. A fertile egg will not be clear, but will show what seem like veins or threads running toward the center. Eggs that are not fertile do not have these, but are clear. Take these out for market or home consumption.

E. L. VINCENT.

## Buy the Best First The Cyphers Incubator

SOONER or later, you will own a Cyphers Incubator. Why not start right? Cyphers means big hatches of healthiest chicks—no moisture, heat or ventilation troubles. Used by more Government Experiment Stations, Agricultural Colleges, Fanciers and Practical Poultry-raisers than all other makes combined. Cyphers patented features found in no other.

### The World's Standard Hatcher

is guaranteed to you. You have 90 days to prove its superiority. Send for 160-page Free Catalogue. Address Nearest City.

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**Victor Incubators and Brooders**

Quality tells in the right materials, right building, right ventilation, right regulation, means more chicks and greater profit. Victor quality costs but little more and the difference on one or two batches more than pays it. Write us first. Our book "About Incubators" will be sent free. It has important information for incubator buyers. GEO. ERTEL CO., 146 Kentucky St., Quincy, Ill.

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If you want \$2 profit where you now get \$1, either from eggs or poultry for market, simply send us your name and address and let us tell you the real poultry secret that has doubled the profits of poultry raisers. Its the only real way to poultry success. Make every dollar a profit earner. Write at once for this information whether you have 3 fowls or 300. It's free to you. Blanke & Hawk Supply Co., 123 Blanke Bldg, St. Louis, Mo.

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Made of High Carbon Double Strength Coiled Wire. Heavily Galvanized to prevent rust. Have no agents. Sell at factory prices on 30 days' free trial. We pay all freight. 37 heights of farm and poultry fence. Catalogue Free. COILED SPRING FENCE CO. Box 18 Winchester, Indiana.

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This little tool is a marvel. Regular hand sewing machine. Will mend anything from thin fabrics up to heavy shoe and harness leathers. Worth its weight in gold. Easily carried in the pocket ready for any emergency. Only \$1 postpaid. Special terms to agents. Big territory. Book 49 free. C. A. Myers Co., 6537 Woodlawn Ave., Chicago

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and Almanac for 1910 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c. C. C. SHOEMAKER, Box 725, Freeport, Ill.

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All leading varieties pure-bred Chickens, Ducks, Geese and Turkeys. Largest Poultry Farm in the world. Fowls, Eggs and Incubators at lowest prices. Send for big book, "Poultry for Profit." Tells how to raise Poultry and run Incubators successfully. Send 10c for postage. J. W. MILLER CO., Box 203, Freeport, Ill.

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of pure bred poultry, for 1910, 200 pages, handsomely illustrated, 150 engravings, photos, 30 fine colored plates, describes 85 leading varieties of land and water fowls, gives low prices of stock, eggs, incubators, poultry supplies, etc. Calendar for each month. How to care for poultry and all details. Only 10 cents. Send to-day. B. H. GREIDER, Box 62, Rheims, Pa.

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And Squabs. Tells how to start in small and grow big. Describes largest pure-bred Poultry Farm in the world and gives a great mass of useful information about poultry. Lowest prices on fowls, eggs, incubators and brooders. Mailed for 4c. F. Foy, Box 10, Des Moines, Iowa

### Breed Prize Winners

We have the stock at right prices—all leading varieties; 100 pens. Write us. Booklet on "How to Raise 48 Chicks Out of 50 Hatched," 10c; Poultry Paper, 1 year, 25c; Catalogue Free.

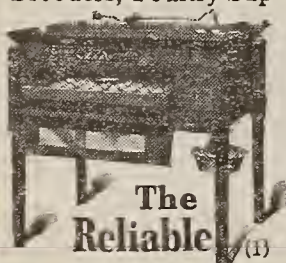
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## "A House of Quality"

has been our motto for

**28 Years**

that we have been manufacturing Incubators, Brooders, Poultry Sup-



The Reliable

plies and operating the Reliable Poultry Farm. Our aim is and always will be to manufacture goods of such quality that will give the very best of satisfaction in hatching, raising chickens, ease of operation, economical in cost of running, and machines that will last a lifetime with ordinary care.

This has been proven by the thousands of testimonials and 648 first premiums that have been won by our company.

We want to sell you.

Send for our catalog giving you prices and proof of quality. It is free. Address

Reliable Incubator & Brooder Co.  
Walton Heights Box D41 Quincy, Ill., U. S. A.



# Poultry-Raising

## What is a Good Hen-House?

Ask a good many that question and they would say, "A big beam out in the barn."

And that is where thousands of hens do roost out in the country every night, even in this day and age of progress. We have been slow to learn that to make poultry-keeping a success we must make preparation for it.

It is not such a hard matter as many suppose to build a house for hens that will really be worthy the title of good. The requirements are not so many that we may not all of us meet them, and meet them without going to great expense.

First, give plenty of room for the number of hens you intend to keep. Better build a little too big than a mite too

down during the day. Put a ladder up to the open end for the hens to reach the boxes. Keep those boxes as clean as a pin.

With feed-troughs, dust-boxes and a good place to drink, you have a hen-house that may well be called good. Then, other things being as they should be, you ought to get lots of eggs and take comfort with your birds, and they with you.

E. L. VINCENT.

## Cocoa-Butter for Sorehead

IN YOUR issue of January 10th I noticed an article headed "Sorehead in Fowls."

The disease of which the "Indiana poultrywoman" complains is very similar to one which for the past three years has proved a scourge to the young poul-



A Young Beginner

small. One of the greatest mistakes we can make is to crowd our hens too much. For forty to fifty hens, and that is as many as should ever be put in together, the house should be at least twelve by sixteen feet. This would give not far from five square feet to each hen, if forty are to be kept, and this is as little room as any hen should be confined in. There has been an idea that the higher the roof, the better. This is not really true. Now we know that if we build the roof low down we save in material and keep our poultry warmer.

Again, make full preparation to let in the sunlight. Nothing will make hens happier than plenty of light. They don't like shadows. Take a hen that is cawing around cheerily in a nice bright house and shut her up in one that is dark and dismal and her song will soon die away. She will go groping her way about and perhaps take to the roost. Let the light in, then, through good-sized windows. Put the windows up rather high, and have them the longest up and down. Then you will get more light over the room than by narrow horizontal ones.

The house, of course, should be faced south—the sunny way.

But what about the floors? Well, you may have them of the natural earth or of cement or of plank. For me, board floors are best. You will have to keep your thinking-cap on pretty nearly all the time if you remember to clean a dirt floor as it ought to be cleaned, and if you do not, you may be sure you will not have healthy hens. Cement isn't very warm in winter. But for an all-around floor give me boards. I would lay down first a floor of rough boards and then on top of that matched stuff. That makes it warm.

If the hardness of a board floor does not suit you, put down sand or litter.

The roosts should be of three by four stuff, not poles cut in the woods such as we used to see. If you want to round the top, where the hens roost, a little, all right, but a good flat surface is best. These pieces should be rather low, not more than three or four feet from the floor, and it is a good plan to have a shelf or platform under the roosts to catch the droppings.

For the eggs, build a long narrow box and fasten it to the side of the wall several feet from the floor, with a hinged door the whole length of it or, better, several doors to lift up when you want to gather the eggs. Leave this door

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is success and satisfaction with a

## Sure Hatch Incubator

We allow you a sixty days Free trial. We give you a signed guarantee protecting you against defects in material and construction, and the Bankers' Surety Company of Cleveland, Ohio, with \$1,000,000 capital and surplus, issue to you a Surety Bond guaranteeing that we will live up to the promise made in our liberal guarantee.

We couldn't afford to make the guarantee we do, and the Bankers' Surety Company would not back our guarantee with their good cash if the **Sure Hatch Incubator** were not the best built, most dependable incubator on earth.

The Double Redwood Walls with the Dead Air space between for insulation, the Dependable Hot Water Heating System, the Sensitive Heat Regulator, and the economical steady burning lamp are some of the things that make **Sure Hatch Incubators** more than merely satisfactory—they never fail to hatch the fertile eggs. We pay the freight.

Don't take any chances: There are so many incubators on the market that claim to be the best, that you ought to buy a machine that is absolutely guaranteed to give full satisfaction, and look into the guarantee as well as the incubator. The **Sure Hatch Guarantee** is the only one backed by a \$1,000,000 bond. Purchasers actually receive this Surety Bond at the time of purchase.

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**Write to-day for big 100 page Poultry Book Free**

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A letter or postal—either one will do—then we'll send you our literature and valuable information on raising poultry to make money. Racine Incubators turn healthy eggs into healthy chicks every time—and give the highest percentage of hatches. They are sure—safe—and simple—made to last a lifetime—sold at prices lower than anybody else will quote you for the same quality—and they make money for you right from the jump and give everlasting satisfaction. Write and get our proposition—our literature is free. Free Trial plan—best ever offered. Don't delay—Write for full information today.

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WISCONSIN INCUBATOR CO., Box 79 Racine, Wisconsin

Thos. J. Collier, Mgr.

**Wisconsin Incubator Co.** Evansville, Wis.  
Dear Sirs:—We are well pleased with the incubator which we bought of you. We obtained good results with it. From 455 fertile eggs we got 416 chicks. I think it was a good hatch. I do not think any incubator can beat that. The Wisconsin Incubator is O. K.

JOHN DOUGLASS.

**Wisconsin Incubator Co.** Peshtigo, Wis.  
Dear Sirs:—The incubator which I received from you had a capacity of 125 eggs and I placed 143 eggs in it and hatched 137 chickens, which I think was a pretty good hatch. From the second hatch I got 115 chicks out of 130 eggs.

G. A. TRIPPLER.

**Wisconsin Incubator Co.** West Park, Ohio.  
Dear Sirs:—I have had fine success with your incubator. Out of two hatches I got 238 chicks, all healthy and strong. I consider this very good. There is not an incubator in the community that equals the Wisconsin in hatching.

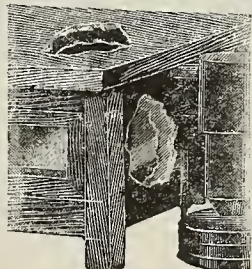
GEO. C. GEERING.

**Wisconsin Incubator Co.** Lockport, Ill.  
Gentlemen:—I had good success with your incubator. I got 93 chicks from 97 eggs and 97 chicks from 103 eggs. I think the Wisconsin is a fine machine. There may be others just as good but I don't think there are any better. I have neighbors who will send for one this winter—they are so well pleased with mine.

HECTOR DENNISON.

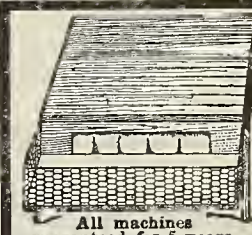
**Wisconsin Incubator Co.** Bancroft, Wis.  
Gentlemen:—I had very good success with your incubator. The first time I got 112 chicks from 120 eggs; the second time, 117 from 125 eggs. I think this is fine, considering that I never saw an incubator before. But I find that all that is necessary is to follow directions. I think I shall send for another in the spring.

MRS. DAVID GETMAN.



This illustration shows the double walls, dead air space construction of our machines.

No other manufacturer can use better material in the construction of his machines than we are using in our machines. Incubator made of California Redwood. Lamps galvanized iron. O. K. burners. Taylor thermometers.



All machines guaranteed for 5 years.

**Wisconsin Incubator Co.** Tolley, N. D.  
Dear Sirs:—We received the Incubator and Brooder in good shape, and to our surprise, not having any experience with incubators, the first hatch was 94 per cent, the second was 96 per cent and the third was 98 per cent. We did not know anything about operating the machine, but old, experienced poultrymen say that it is a grand record. J. F. BELTZ, Ideal Farm.

**Wisconsin Incubator Co.** Ventura, Ia.  
Gentlemen:—I wish to say that the incubator purchased of you has given entire satisfaction. It hatched about 95 per cent of the eggs. I think I can sell three machines for you here.

MRS. CAROLIN ADAMS.

**Wisconsin Incubator Co.** Wakonda, S. D.  
Dear Sirs:—Would not take \$20 for my incubator if I could not get another. I set it three times. From the first hatch I got 105 chicks; from the second hatch I got 112 and from the third, 116 chicks from 120 eggs. Chickens are healthy and strong and I lost hardly one. I think I can sell 12 here.

MRS. M. FISHER.

**Wisconsin Incubator Co.** Tayer, Ill.  
Gentlemen:—I received the Incubator and Brooder last March. Am perfectly satisfied with results. From 120 eggs, 20 not fertile, I got 98 chicks, making 98 per cent. Don't think I could have equaled this with any other incubator.

ARTHUR S. ALLEN.

**Wisconsin Incubator Co.** Muscoda, Wis.  
Dear Sirs:—Received Incubator from you last April and had very good success. From the first hatch got 109 chicks from 115 fertile eggs. From the second hatch, 120 chicks from 124 fertile eggs. Am well pleased with the \$10 machines. Will hatch as many as any high-priced machine.

MRS. HENRY BECKWITH.



## COST OF ROOFING

All the facts prove Sea Green and Purple Slate to be the least expensive

Because it is used so generously on the finest homes in this country, and on the pitched roofs of the best buildings, churches, museums, libraries, etc., everywhere in fact, where the roof must fittingly finish with a chaste uniformity the construction of the building beneath, Slate has the reputation of being an expensive luxury. Its many excellencies, its proof against fire, its cleanliness, its orderliness, its smart, high-class and prosperous look, have gained it many an admirer who has, however, never given it consideration on his own buildings because he thought it too costly.

True, to put on a roof of Sea Green and Purple Slate (the most durable of all varieties) does cost a little more than one of tin, iron or shingles—on the average only a few cents a square foot more—but once on it begins instantly to cost less. For while tin costs 27c, shingles 35c, and iron 57c to maintain 100 square feet a year, the same area of slate costs 3½ cents only—or less.

John Black, Editor of the Carpenter and Builder, says: "The value of a roofing is determined by a variety of considerations among which the most important are first cost, durability, appearance, resistance of fire, and expense of maintenance and repairs. We think it is safe to say that nothing equals Sea Green and Purple Slate. Properly put on, it requires no further attention—it is practically permanent and requires comparatively no repairs."

Because of this utter absence of repair expense, a Sea Green and Purple Slate roof becomes cheaper even than wood shingles after only six years. The rich man who covers his mansion with aristocratic slate is, therefore, not extravagant nor arrogant, but sensible. Slate costs him less than anything else—eventually: and not such a very long "eventually" either. Furthermore, while it is saving him money every year after the first, it is giving him appearance, safety from fire, freedom from worry and annoyance, and weather protection of the most perfect sort, year after year, without fail, for nothing extra.

So long as the building of which it forms the roof, endures, Sea Green and Purple Slate will give perfect service as a roof. The day that building comes down, the slate develops into an investment. Slate, especially Sea Green and Purple Slate, being the hardest of all rocks, ages very, very slowly. It neither rusts, rots nor wears. If dismantled carefully, therefore, it will come off the building practically as good as ever—hence saleable. Length of service as a roof destroys the market value of every other kind of material. It affects Sea Green and Purple Slate roof practically not at all. For example, in 1805 some slate quarried in 1800 was used to roof a church near Delta, Pa. In 1893 the church had to be demolished, becoming mere debris; all except the slate, which was sold for use on other buildings.

In reality a good slate roof is an asset rather than an expense. It actually increases the value of all property on which it is used.

## Why not Have a Roof That Never Wears out?

You **can** be saved of all the trouble and expense of a leaky roof forever. You can have a roof on your home or barn that will enhance its value—reduce fire or spark risks—last as long as the building stands—never need painting or repairs—and it will actually cost you less than any other kind you can name.

In justice to yourself and your inborn sense of economy—isn't it worth your while to specify that **such** a roofing be used on your barn or home—**now**?

## Sea Green and Purple Roofing Slate

is absolutely uniform in quality, is inexpensive and wears forever. By it, in durability, service and satisfaction, all artificial preparations are judged—yet no manufacturer has yet perfected an imitation as good as the **natural** universally satisfactory Sea Green or Purple Slate which every contractor, builder or roofer, who knows anything at all about roofing material will recommend to you.

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## Poultry-Raising

### Fires and Fireless Brooders

I PREFER the heated, if heated right—but some folks in the poultry business on a more varied and larger scale than myself prefer the fireless brooders.

Many people will neither trust an incubator or brooder with burning lamp outside their hearing or sight—and smell, for it was by the smell that I saved my whole outlay of buildings, house and all, from fire caused by a brooder-lamp. It was my own fault. I knew the burner catch worked too loosely—a jar would throw it up—and then that sets the wick to smoking, it burns down until it melts the burner from the lamp, the burner falls to one side and the oil takes fire, and if you are not in sight in time, away goes everything. There is not the least bit of use in having a loose catch on the lamp. Look to that well and you will have no fires with a well-made brooder. Even then, I never would place either brooder or incubator in a barn or a building next a barn or any house.

Also, never turn the wick of a brooder-lamp high. Chicks do better without so much heat almost from the first. Even a lamp-heated brooder can be given an extra hover, and after a bit you can turn the lamp out at nights or when you leave the house.

A hot-water-heated brooder you can place anywhere. In most of them the hover fringes are hung over copper wires. Over the wires is placed a twenty-four-inch square of asbestos, with an opening in the center fifteen inches square. A flame tank goes over this opening, and this tank is covered by an asbestos insulator. Hot water is put in the tank, and the insulator placed over the tank. The heat is forced down over the backs of the chicks. It is said that water will remain warm in this tank for from ten to twelve hours in winter. The brooder box this is placed in must give room for the chicks to scatter out away from the direct heat above.

The simplest fireless brooders have a hover made of a barrel-hoop to which are nailed four six-inch legs. A heavy piece of old blanketing is cut six inches larger in the rounding than the hoop, fringed all about to four-inch depth and laid over the hoop. The blanket is pressed down in the center and kept in place by some cotton or wool laid in the depression. The chicks snuggle up against this. This hover is placed in a box slightly larger than the hoop and provided with some ventilator holes, a door and light—if to be kept in a heated room. If it is to go out of doors, a larger and very tight box, with ventilators, window glass and door must be provided. The top of this outside box is hinged on, and covered with tar-coat roofing to turn rain. This is a cheap fireless brooder, and in the hands of careful people an effective one. I. M. S.

### Chickens Too Fat

WHEN I first begun farming on my own hook, I made it a rule to turn to the poultry page of my farm paper the first thing when I received it; but I soon learned the answer to the major part of the questions asked was "too fat." Then I learned the poultry department was in charge of some one in the East, where the chickens are kept penned, and his answers in regard to poultry would not apply to us in Missouri, where chickens have unlimited range. I feel safe in saying that more hens die of starvation than of over-fattening, where they are not penned.

Some years ago I heard a lady say she was not getting any eggs; she believed her hens were too fat, and at that time, to my knowledge, they had no grain of any kind on the place and the chickens were supposed to scratch for a living. Last spring there was general complaint among farmers' wives in this region that their hens did not lay and would not set. What was the matter with them—were they too fat? By no means; they were too poor. A poor hen will never set. I had no trouble, for I feed my hens twice a day.

I heard a child say the other day their hens were freezing in their hen-house; when they picked them up they were just as light as could be. I could guess what was the trouble with them. When corn is sixty to seventy cents a bushel and wheat around a dollar there is no danger of the average farm fowls getting too fat. MARGARET K. RAILEY.

Circumstances alter cases in poultry-dom as surely as anywhere else. There

are some general principles that are as good in California as they are in Massachusetts. There are plenty of methods that win in one state and lose in another or, even, win for one man and lose for his neighbor. That is why beginners, without experience to give them balance, find perfectly good poultry advice often puzzling and sometimes contradictory. Nobody can learn the poultry business from print alone; but one can learn a good deal by reading if he receives what is presented in a spirit not of unquestioning faith, nor of doubt, but of intelligent sifting in the light of his own circumstances. EDITOR.

### Worried About Their Poultry

A FRIEND from Michigan says his chicks get weak in the legs, hobble around for a time and then die. So far thirty chicks have been lost.

This is probably what is known as leg weakness and comes as the result of pretty high feeding. In this disease the chick seems well in other respects, but can scarcely stand and sometimes sits down to eat. The cause being removed, recovery should be rapid. Give more bone-making food, such as fine-ground bone, clover-hay and plenty of bran, barley, skim-milk or buttermilk and vegetables. Take away meat and do not let them have anything of a stimulating nature. For young chicks, medicine is not advised; in fact, it is dangerous unless it is given under the direction of an expert. Better let Nature have a chance.

From farther West (Nebraska) comes the following call:

"My chicks have been dying, off and on, for more than a year. They show a lameness in the legs at first, and then in a day or two their combs and heads look quite yellow and they die, sometimes in great agony."

From the description it is difficult to identify this disease. It seems most like cholera. If we knew whether there is diarrhea at any stage of the trouble it would be a help in diagnosing the case.

With cholera, the first thing noticed is a yellowish appearance in the droppings, especially the part secreted by the kidneys. The bird tries to get away from the rest of the flock and stands all drooping, head down, feathers rough and head drawn down toward the body. Now there is great weakness, drowsiness, great thirst, indicating fever. The comb becomes pale and bloodless, and death may come without a struggle, or convulsions may be present. The disease will often run through a flock in a week, but may become chronic and hang about the place for months.

It is not easy to treat. The best way is to make the premises absolutely clean and keep them so. It is a contagious disease, and the germs must be wiped out and kept out. The moment a bird begins to show the disease, take it out of the yard and disinfect the premises with a pound of carbolic acid to twelve quarts of water. Keep the droppings gathered closely every day and disinfect them before putting them away. White-wash the buildings, adding to every gallon of the lime one fourth of a pound of carbolic acid. Cremate any birds that die of the disease, or bury them deep. Be sure you bring no bird to the farm that has been affected with this trouble. Keep the birds on good high ground. E. L. VINCENT.

### Hatching-Season Don'ts

Don't allow your temperature to run over one hundred and four degrees.

Don't fail to see that the wick is trimmed and the lamp filled daily at a certain hour.

Don't fail to turn the incubator eggs daily.

Don't forget to put a little salts in the drinking-water the first two or three days.

Don't crowd the chicks. Over twenty-five chicks is too many in one coop.

Don't fail to clean your brooders and brood-coops daily if you want clean, healthy fowls.

Don't forget the fresh air. Here is the mainspring of health and the road to success.

Don't forget the open-front house. They are best at all seasons of the year.

Don't think that the poultry business is going to be overdone. It never will be. A. E. V.

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## Farm Notes

### Let the Soil Show What It Needs

A VERY pertinent and practical farmers' institute question which lies before me is this: "How is the ordinary farmer to find out which elements his soil lacks, in order to supply needed material?"

It is but natural to think that the simplest way to answer this question would be to refer it to the chemist and let him analyze the soil, but the chemist knows well the difficulties of this method. He can use only something like a quarter or half an ounce of soil for his determination. Who among us is wise enough to secure a half ounce of soil which shall truly represent the average of a given farm or field. Samples must be taken from a number of places and thoroughly mixed. How deep should one go in securing them? Each inch may vary in its composition. How far down will the roots go in search of food, and what proportion will the plant get from these different depths? All those considerations complicate the matter.

Then, with the best sample possible and the most accurate work which the chemist can do the variation within the limits of error may be great enough to materially modify the result. Furthermore, the chemist is still in doubt about how near the amount of plant-food which his reagents extract from the soil corresponds with the amount which the plant can get from that soil. Chemical analysis, therefore, while it may throw some light on the problem, does not afford an adequate answer to it.

The land itself will tell the story if we but give it the opportunity. Lay off a

drops decidedly below the completely fertilized plot, it shows that phosphoric acid is needed. It is a good thing to repeat such tests, for sometimes other things may influence results.

A fair application for hay on average soils, would be one hundred to two hundred pounds of nitrate of soda, five hundred pounds of acid phosphate and one hundred to one hundred and fifty pounds of muriate of potash per acre, the amounts per plot being one tenth of these as before.

For grain crops the phosphoric acid is likely to be the most important item. It is possible to get some idea of results by simply putting a hundred pounds of a given fertilizer or any desired combination in the drill and marking off the space covered, then watching results. It being so much more difficult to obtain the yields from individual plots of grain, few farmers will care to attempt it. It is, however, perfectly feasible with the corn crop.

By a little effort along this line no farmer need work in the dark as to the needs of his soil. FRED W. CARD.

### To Tan Skins With the Fur On

THE best response we can make to our Oregon subscriber who wants to know about tanning skins, particularly sheepskins, is to reprint the following recipes, which were quoted from Bailey's Shoe and Leather Reporter in FARM AND FIRESIDE of August 15, 1888:

"Take two parts each of alum and salt, and one of saltpeter, all well pulverized. Clear the flesh of fatty matter. Sprinkle it white with the mixture, fold in the edges and roll up; let it remain four

| 1 | 2                     | 3                        | 4                        | 5                        | 6                        |
|---|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|   | 10 lb nitrate of soda | 10 lb nitrate of soda    |                          | 10 lb nitrate of soda    | 10 lb nitrate of soda    |
|   | 20 lb blood           | 20 lb blood              |                          | 20 lb blood              | 20 lb blood              |
|   | 50 lb acid phosphate  |                          | 50 lb acid phosphate     | 50 lb acid phosphate     | 50 lb acid phosphate     |
|   |                       | 20 lb sulphate of potash | 20 lb sulphate of potash | 20 lb sulphate of potash | 20 lb sulphate of potash |
|   |                       |                          |                          |                          | 200 lb lime              |

series of plots, each containing one-tenth of an acre. These may be four rods square or two rods wide by eight rods long. To the first of these apply nothing, to the second nitrogen and phosphoric acid, to the third nitrogen and potash, to the fourth phosphoric acid and potash, to the fifth all three of these; then if it is desirable to know the effect of lime, add that to another plot which receives all three.

Suppose the test is to be made with potatoes. A good complete application, taking half a ton to the acre, can be made up as follows:

100 pounds of nitrate of soda.  
200 pounds of dried blood or tankage.  
500 pounds of acid phosphate.  
200 pounds of sulphate or muriate of potash.

On a tenth-of-an-acre plot one tenth of these amounts would be needed. The applications to the divisions of our testing ground would then be as shown in the table. Number 6, on which the lime test is made, gets two hundred pounds of it, equivalent to one ton to the acre. That is more than many soils would need, but others, which are obviously acid, might need more.

Other equivalent materials can just as well be substituted for the test if desired. Dried blood contains more nitrogen than tankage and is probably a better material to use, but costs more. Four hundred pounds of basic slag may replace the five hundred pounds of acid phosphate, if preferred. Sulphate of potash is thought to give a little better quality to potatoes than muriate, but the difference is not great.

Care should be taken not to harrow across these plots in such a way as to carry the fertilizer from one to the other, and they should be so laid out that it is not likely to be washed across.

A careful measurement of the yields will tell more than any chemist could about the needs of the soil. Comparison of the check plots with the one receiving all three ingredients will show the benefit from a complete fertilizer and whether such an application pays or not. If then the plot which received no nitrate of soda and dried blood yields as well as the one which received all three elements, this is pretty good evidence that nitrogen was not needed and can be left out under similar conditions. If, on the other hand, the one which received no acid phosphate

days, then wash with clean water, and then with soap and water. Pull the skin when drying it to make it soft.

"Another recipe: Lay the wet skin on a smooth slab or hard board; scrape with a dull knife until all loose flesh and film is removed; then wash off in soft water. Place it in a glass or stone jar with an ounce of oil of vitriol and a gallon of rain or river water. Let it steep in this for about half an hour. Take it out and work it with the hands until dry, when it will be pliable and soft. The more worked the softer. Use no grease."

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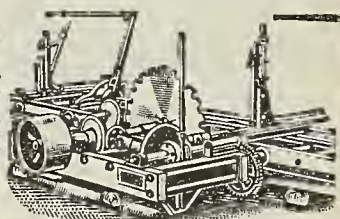
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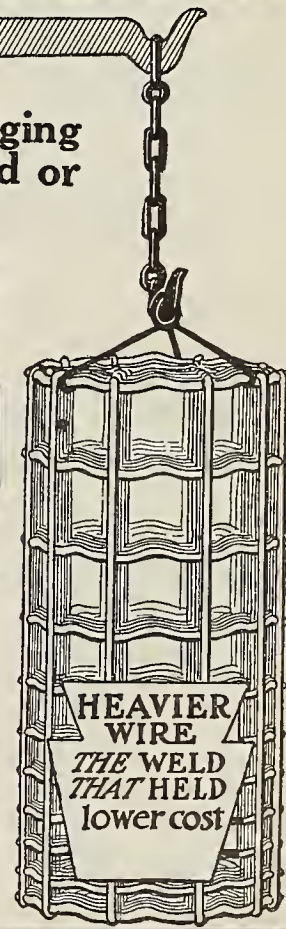
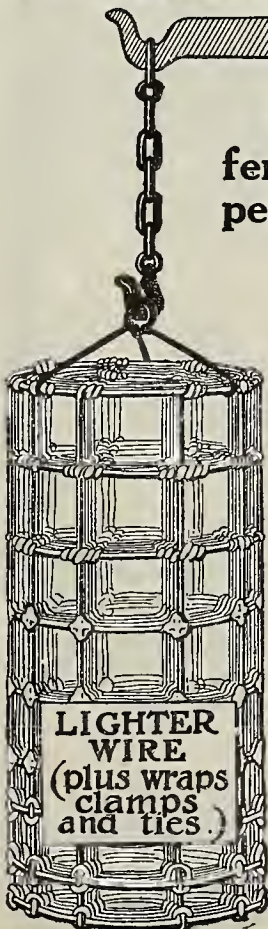
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**A**RE you losing money? If you had a hole in your pocket, out of which you were losing hard-earned dollars, would you sew it up? The time has arrived when a fence around the farm is as much a necessity as a cultivator.

If you are feeding 60c or 70c corn to hogs in a dry lot, allowing good, green feed to go to waste on other portions of your farm, you have a hole in your pocket, out of which you are losing good, hard-earned dollars. Sew it up.

Look up an American Fence dealer and let him show you how a few dollars invested in fence will yield a big rate of interest on feed saved.

American Fence is made of hard, stiff steel. It is made of a quality of wire drawn expressly for woven-wire-fence

purposes. Galvanized by latest improved process—the best that the skill and experience of years has taught. Built on the elastic, hinged-joint (patented) principle, which effectually protects the stay or upright wires from breaking under hard usage.

The real test of a fence is the service you get out of it. Test, judge and compare American Fence under any and all conditions, and you will find that the steel, the structure and the galvanizing are equal in durability, strength and efficiency to the hardest usage.

**F. BAACKES, Vice-Pres. & Gen'l Sales Agent  
American Steel & Wire Co.**  
CHICAGO NEW YORK DENVER SAN FRANCISCO

NOTE.—Dealers everywhere. See the one in your town and have him show the different designs and give prices. Also get from him a booklet, "How to Build a Cheap Concrete Fence Post," furnished free for the asking.

## Farm Notes

### Diversified Farming—A Problem in Combinations

**I**N DIVERSIFIED farming it is essential that we give due attention to each branch of farming that is being practised and seek to harmonize them all. We must select only those branches which we find adapted to our farms and which fit nicely into our general scheme of farm management. We can see farmers about us on all sides who are trying to do too many things. It takes a very energetic and ambitious man to make a success, with limited capital, of more than one or two branches of farming to which he gives his study and best service. Of course, he may follow other lines of work, but these should to a certain extent be subservient to his one or two specialties.

We must plan our year's work so that each crop may and does have its own proper time and attention and is not neglected to care for some other crop that needs care and attention at the same time. When a man has a field of beautiful and thrifty corn, he knows that the surface soil needs stirring after every rain and that if he allows it to become hard and lumpy the crop will be damaged. If he has a few acres of small fruit that ripens at the time the corn needs cultivation, there is sure to be trouble. Small-fruit growing and general farming do not go well together. On the other hand, orcharding and general farming make a good combination. The grain is in the bins and the corn in the shock by the time the fruit is ready to harvest.

Dairying and stock-growing form an excellent combination and one that will improve the fertility of the farm. Dairying and potato-growing make another good combination. The potatoes may be grown in the same rotation of crops that is practised to produce the food for the dairy cattle. The work may be done with the same help and very little extra horsepower.

Late corn and wheat do not pair well. The Western farmer who grows a large acreage of them finds that he must plant his corn early and push its cultivation so as to have it well out of the way by the time his wheat crop is ripe. Late-planted corn and wheat both need attention at the same time, and one or the other must suffer.

A second consideration in diversified farming should be to grow a rational rotation of crops adapted to the needs of the live stock and one that will not diminish the fertility of the farm. Corn, wheat and clover constitute an excellent rotation, and when purchased grain is being fed in liberal quantities this rotation may be lengthened to include a cash or market crop.

Another matter for us to consider in choosing our crops is economy of outfit. At best the equipment necessary to a general line of farming is large and must increase as the business expands. As a general rule I believe in keeping up to date, but the diversified farmer must go a little carefully or he will soon have a fortune lying around in second-hand tools and machinery. This same rule applies to buildings. Particularly in the case of going into promising new crops which need special equipment we ought to make sure that we are going to follow the matter up extensively enough to warrant the investment.

Another matter is the adaptation of certain crops to certain soils. Every man has to study that out for himself. There is a science rapidly growing up around the growth and development of every farm crop that will repay our continued attention.

W. MILTON KELLY.

### Rye for Humus-Making

**S**EVERAL subscribers have asked further details regarding the use of rye on light sandy soil, which I discussed December 10th.

The rye treatment benefits the land more by adding humus than by supplying the soil elements as potash, nitrogen, etc. It is known that soils possessing by chemical analysis liberal quantities of the essential soil and crop constituents, if lacking in humus, fail to produce satisfactory crops. These lands by the addition of liberal quantities of humus-producing manures, grasses, etc., yield bountifully. Some special crops, as potatoes, on extremely light, fine sand soils of northern Michigan, it is true, produce for a few seasons paying crops of bright, large tubers with little or no humus, but as the potash, of which these lands have usually a large content, becomes depleted, crop failures are common. Other crops, save rye, prove, normally, complete failures on these lands, no matter how well cultivated.

But, fortunately, conditions are favorable on nearly all light soils, not alkaline, for a good growth of rye. As it is by nature a tall strawed grain we have in its rank growth a humus supply of unquestioned merit, easily and cheaply to be obtained. The ground is prepared for rye by the usual plowing, harrowing, etc., necessary for any grain crop; but I would advise a sowing of the grain rather earlier in the season than is customary, say from the fifteenth to the last of August, so as to secure a larger growth to mat and cover the ground before freezing weather, which helps to retain a snow covering during the winter and also prevents the soil from washing and leaching more or less.

I prefer to seed one and one half to one and three fourths bushels per acre, either broadcasting or, preferably, drilling very shallow, not over two inches deep in well-fitted soil. When it has attained its full growth or, say, full bloom it should be plowed down, employing the jointer and chain if necessary. After plowing, harrowing and again fitting the ground, a second crop should be sown, and in the meantime if one has a surplus of coarse or other manures they can be applied advantageously, after plowing, to the higher, lighter places, previously marking them with stakes. The second crop of rye on extremely light soils should be treated similarly to the first, but ordinarily this is not required, as when one good growth of rye is turned under, it leaves enough humus in the soil so that the second crop can be safely left to mature, without plowing under.

Clover, seeded liberally among the standing grain of this second crop and harrowed lightly in the spring, is almost sure to "catch," and the tall standing rye-straw partially shades the young clover without crowding or smothering it as wheat, oats, barley, etc., are inclined to do. It is advisable not to pasture a first seeding of clover the first season on such lands, unless with calves or other light stock. No sheep or large stock should be turned on, as the young clover does not root sufficient to form a sod firm enough to sustain the weight of larger stock, and sheep nip too close, endangering the life of the young plants.

G. A. RANDALL.



## Farm Notes

### Disking Before Stirring

THERE is general appreciation of the advantages of disking fall-plowed land the following spring, in fitting the seed-bed. On some carefully-cultivated farms this is done twice—once to excite the germination of fowl seed and once again to prepare the seed-bed for the crop.

Another place where the disk comes into frequent use is the fall preparation of land that has been cropped all summer, before sowing winter grain. I have seen few farmers, however, who appreciated the advantage of running the disk before plowing, particularly in

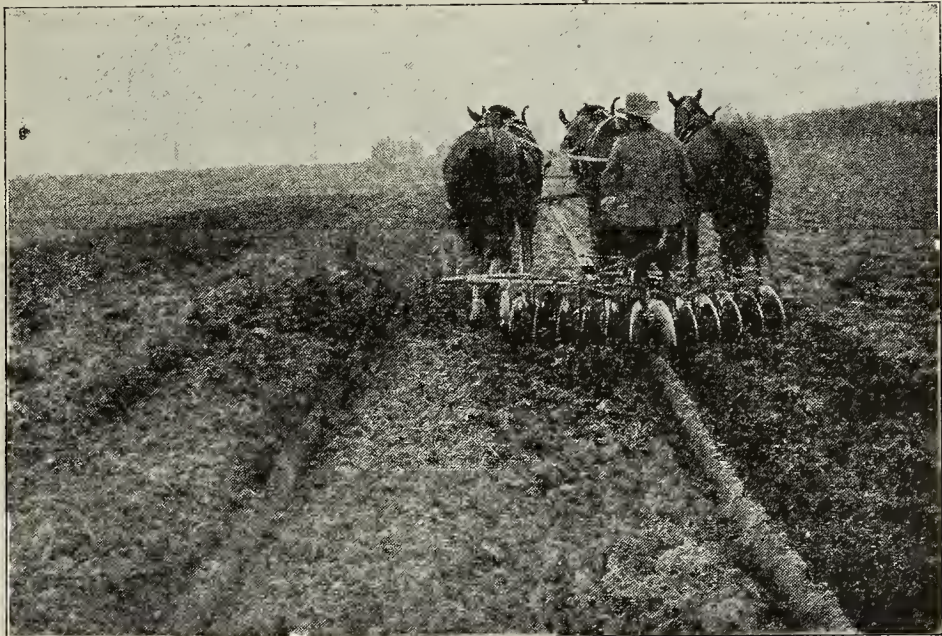
### Agricultural News-Notes

The two big words just now, are conservation and reforestation.

Heretofore the big Burley tobacco markets have been Louisville and Cincinnati. A third one has now been established at Richmond, Virginia.

Montana breaks the 1909 record with a yield of four hundred and eighty-eight bushels of "Regenerated Swedish Select" oats, grown on two and one half acres of land near Bozeman.

Prof. W. L. Carlyle, formerly Dean at the Colorado Agricultural College, has



A Good Job of Disking on a Fall-Plowed Field

the spring. There are some very sound advantages of the practice, often overlooked.

Where the ground is disked the soil will break up and turn under easier. Horses' feet do not sink into an unplowed field, and their firmer footing enables them to pull the heavy disk with less effort than over soft, uneven, plowed land. Then, any trash, stubble, weeds or other material on the surface are cut up, and after being covered by stirring are more quickly transformed into a valuable fertilizer than if turned under in a bulkier form.

Disking before stirring also assists in forming an ideal seed-bed by thoroughly pulverizing the surface soil, which usually is turned under in a hard, cloddy condition and left at such a depth that it is not reached by the harrow later on. There is another economy in disking before stirring if the field to be plowed has corn-stalks on it. The disk breaks down and cuts up the stalks, thus saving the operation of running the stalk-cutter through. It also smoothes the field and leaves the surface level, which enables both the teams and plow to move along more freely when plowing, and reduces wear and tear all around.

M. ALBERTUS COVERDELL.

### Make Sure of New Seed-Corn

WE ARE very apt to be strongly impressed with the superior value of new varieties of corn when we read glowing descriptions in the seed catalogues. The reports of enormous yields may be true, but it is not conclusive evidence that we can be as successful as the man two or three hundred miles away. The locality where the corn was grown should be considered. One of my neighbors was very much taken with the description of a new variety of corn and thought of buying seed to plant his entire crop, but luckily decided to test it in a small way first. He found that variety much too late in maturing for his locality. It was barely beginning to harden when frost came. If he had planted largely of this variety it would have meant great loss.

Last year I planted a small plot of a new variety. The blades died on the stalks before the corn was ripe. The acclimated varieties near-by kept the blades perfectly green until the husks on the ears turned white.

Too many farmers lose on seed sold them in perfectly good faith. Sweet corn, it is well known, is injured by a change of latitude, and we are finding that the same rule holds with at least some varieties of field-corn. Every one ought to make sure where his seed-corn comes from, and make doubly sure by testing new kinds on a small scale.

A. J. LEGG.

## Kansas Takes 1,000 Overland Cars

Our agents in Kansas have ordered for this season 1,000 Overland automobiles.

Nebraska takes 750—Iowa 1,000—Texas 1,500. Thus has the Overland—after one year's experience—captured the farming states.

It has captured the cities, too. New York City takes 1,000 Overlands this year. Boston takes 500—San Francisco 500—Washington 500—Philadelphia 450.

Our agents have contracted for 20,000 Overlands—for \$24,000,000 worth of Overlands—to supply the demand for this year. That's a larger sale than any other car commands.

Yet, two years ago few had ever heard of an Overland. This sensational success is due to the creation of a remarkable car.

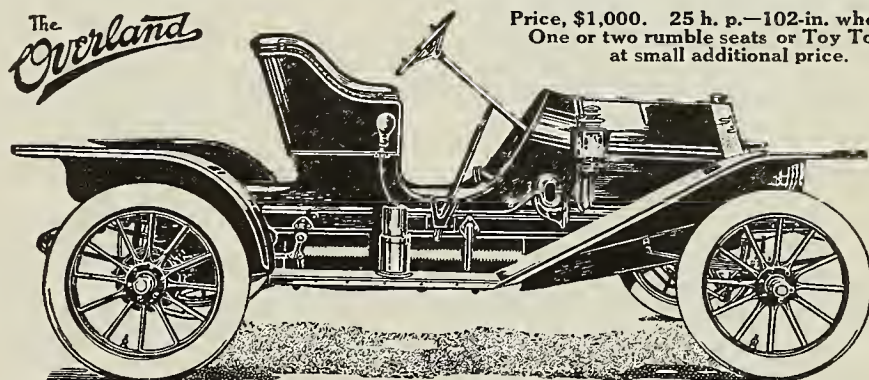
### The Simple Car

The success of the Overland is mainly due to its amazing simplicity. A 10-year-old child can master the car in five minutes. Push a pedal forward to go ahead, and backward to reverse. Push another pedal for high speed. There is nothing else to do but steer.

Any man, with the simplest instructions, can run an Overland a thousand miles and back.

There was never a car so easy to care for—so easy to keep in order.

The  
*Overland*



Price, \$1,000. 25 h. p.—102-in. wheel base. One or two rumble seats or Toy Tonneau at small additional price.

### 20 Per Cent Reduction

The Overland's success is also due to its price. No other maker ever gave nearly so much for the money.

Yet we have cut our costs this year about 20 per cent through enormous increase in production.

The Overland we sell for \$1,000 this year is better than the \$1,250 Overland last year. It is a 25 H. P. car with a speed of 50 miles an hour.

So with the \$1,250, \$1,400 and \$1,500 Overlands. Each offers a fifth more than ever before for the money.

All prices include Magneto and full lamp equipment.

### Ask for the Story

The Overland story is one of the greatest business stories ever told. It tells how this car—the creation of a mechanical genius—has in two years reached the topmost place in this field. And it tells all about the car. Send us this coupon today for this book.

F. A. Barker, Sales Manager, A67  
The Willys-Overland Co., Toledo, Ohio  
Licensed under Selden Patent.

Please mail me the book.

[9]

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and every picture shows the King of all Horse Creation as plainly as if you stood on the track and actually saw Dan Patch 1:55 in one of his thrilling speed exhibitions for a full mile. 2400 distinct moving pictures taken of Dan in one minute and fifty-five seconds means twenty-one pictures taken every second all of the way around the entire mile track from the back seat of a high power automobile. You can see Dan shake his head to let his driver know that he is ready for a supreme effort and then you can watch every movement of his legs as he flies through the air with his tremendous stride of 29 feet. You can see his thrilling finish as he strains every nerve to reach the wire, you can see his driver dismount and look at his watch while thousands of people crowd around, you can see his caretaker force his way through the crowd and throw a beautiful woolen blanket over Dan to prevent his catching cold and then you can follow him up the track before the madly cheering multitudes. As a study of horse motion it is better than the actual speed mile because you can see Dan right before you for every foot of the entire mile. When first shown to the public this marvelous picture caused people to stand up all over the theatre calling "Come on Dan!" "Come on Dan!"

This remarkable moving picture is the most realistic and the most thrilling ever presented to the public. My Free Offer Subject To Withdrawal Without Further Notice.

I have taken a part of the original 2400 wonderful and sensational pictures and made them into a A Newly Invented Moving Picture that you can carry in your pocket and show to your friends at any time, day or night. It does not need a machine, it does not need a curtain and it does not need a light. It is all ready to show instantly either once or a hundred times and Creates A Sensation Wherever Shown.

THIS MOVING PICTURE WILL BE MAILED TO YOU ABSOLUTELY FREE, WITH POSTAGE PREPAID, IF YOU ARE A FARMER, STOCK OR POULTRY RAISER AND CORRECTLY ANSWER THE THREE QUESTIONS.

If You Are A Farmer, Stockman Or Poultry Raiser I Require A Correct Answer To These Three Questions. You Must Answer These Questions.

1st. In what paper did you see my Moving Picture Offer? 2nd. How many head Each of Horses, Cattle, Sheep, Hogs and Poultry do you own? 3rd. How many acres of land do you own or how many acres of land do you rent?

I Personally Guarantee To You One Of These Wonderful Moving Pictures Free If You Are A Stockowner And Answer These Questions And Write Me Today. Signed—M. W. SAVAGE.

IF YOU ARE NOT A STOCKHOLDER AND WANT THE MOVING PICTURES SEND ME 25 CENTS FOR POSTAGE

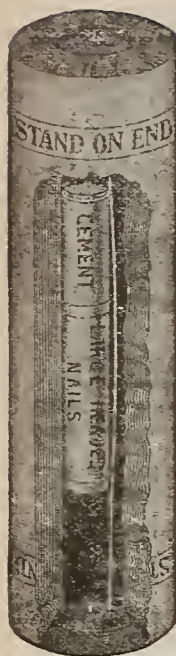
Packing, etc., In Silver or Stamps and I will mail you this Wonderful Moving Picture of Dan Patch 1:55, the fastest harness horse the world has ever seen.—If you send me Twenty-five Cents in Silver or Stamps—EVEN if you do not own any stock or land, I will mail it to you postage prepaid. Reproduction cost me thousands of dollars.

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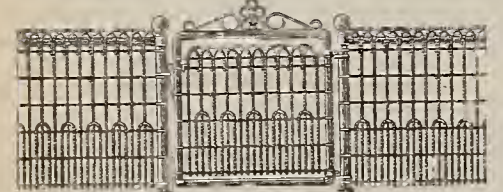
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## Practical Farm Notes

### The Facts About Creosote

**C**REOSOTE is a well-known preservative and antiseptic secured from the distillation of wood, principally the beech. The effect of smoke in the curing of meat is due to the presence of this chemical. The commercial "liquid smoke," so extensively advertised in recent years, is composed largely of creosote or of creosote-oil. As an antiseptic it is of considerable importance and has been used in the medical treatment of tuberculosis. Some of the widely-advertised "consumption cures" are compounded chiefly of creosote.

Creosote-oil is a somewhat similar, but chemically different, product obtained by the distillation of coal-tar, related in character and properties to carbolic acid. It is used extensively as a wood preservative. Of late years much street paving in the cities has been made of wooden blocks treated with a composition consisting of creosote, crude oil and coal-tar in various proportions. This sort of pavement has its ardent advocates, and it is certainly very satisfactory in many ways. But its durability is yet to be thoroughly tested. It may yet prove as unsatisfactory for general utility as the cedar-block pavement which was so enthusiastically tried twenty-five years ago, and afterward entirely abandoned, when it had worn down to a spine-jolting state.

The railroads have experimented to some extent with creosote-oil as a preservative for ties. That it lengthens the life of ties properly treated with it there is no doubt, but whether to such an extent as to justify the cost of the process has not yet been definitely settled.

The average life of a railroad-tie is about five years. Experiments with the creosoted ties indicate that its average life is about three times that. The English railways obtain their supplies of ties largely from the forests of Norway, at a considerable cost. All the ties used there on railroads are saturated with creosote-oil applied under hydraulic pressure. About two and one half gallons is required for each tie. Thus it will be seen that the process is expensive, and only the high price of the ties in their native condition justifies the treatment. The native timber supply of this country, though greatly depleted, is still abundant enough to make it cheaper to replace ties than to creosote them.

The farmer's special interest in creosote is as a preventive of decay in fence-posts and exposed material. Various paints, stains and oils, claiming creosote as a prominent ingredient, have been put on the market. The manufacturers claim great merit for them as preservatives, which, of course, can only be determined by practical experiment. No doubt each of them has more or less worth, but it must depend upon the amount of creosote contained and its efficiency in conveying the preserving element to the fiber of the wood. A mere superficial coating of the oil is not of any very great value. It may delay decay a little, but not enough to count for much. To be effective the chemical should thoroughly saturate the entire fiber of the timber. To accomplish this needs a process similar to that used by the English railways referred to above, which, as far as the farmer is concerned, is impracticable. It would not seem wise to this writer to invest to any considerable extent in any of the preservatives on the market until a good deal of personal experimenting had been done on a small scale. **M. G. RAMBO.**

### Out-Flank the Middleman

**C**AREFUL investigation by the United States Department of Agriculture has proved what many of us have known for years, that the middlemen—from grain speculators to greengrocers—are the real boosters of the prices consumers are compelled to pay if they want to live.

I had some pears for sale last fall. The local dealers offered fifty cents a bushel. They would ship them to the city wholesaler and he to the city retailer. I eliminated the two former, found an independent retailer and received three and one half times what the local men had offered—that is, one dollar and seventy-five cents per bushel.

Take the Christmas turkey of 1909, for instance: He was higher in the Eastern states and probably everywhere than had ever been known. Who got most of the profits?

Those who sold to local dealers—for shipment—received from eighteen to twenty cents a pound; those who eliminated the local dealers and shipped direct to the city dealers, received about twenty-seven cents a pound; while those who took them to the city and sold direct to consumers got thirty to forty cents a pound.

This isn't guesswork; it's actual fact.

Doesn't it make you feel as you would if your pocket had been picked?

In the staples, such as corn, wheat, hay, potatoes, and the like, the local dealer doesn't get such immense profits, at least not often. It's the city retailer that most often comes in for the lion's share. It is to force them to reduce their profit basis to normal percentage that led the well-known economist, Doctor Scarff, to suggest the formation of a league for the suppression of exorbitant high prices—the suggestion that developed, finally, into the meat boycott. Such measures make it more than ever necessary for the producers—the farmers—to be on guard against the dealers, for if the consumers succeed in forcing down prices on the dealers, they, in turn, will make a powerful effort to pass the reduction on to the farmers.

The Department of Agriculture acknowledges that the farmer isn't getting any too much for what he produces. We farmers know that we frequently fail to get enough and that many times, after taking out the cost of production, the answer looks like 0.

Wherefore, let us make ready for the struggle that, evidently, is to come.

Those who can arrange to hold until they get their prices haven't much to fear if they don't lose their nerve. Those that must sell had better make all possible effort to eliminate all middlemen and sell direct to consumers. A day or so spent in canvassing among city consumers might do wonders for many if they made their deliveries honestly as represented.

Go to those who must have what you have to sell, and give them plain facts about quality and conditions. Get their orders and fill them with as good stuff as you promised them, or better, and you will soon have the middlemen crying for quarter. **E. A. WENDT.**

### Clover Experience

**T**oo much pains cannot be taken to get the best of seed for clover-growing. The seed should test at least ninety-five per cent germination. As to manner and time of sowing, no universal rule can be given. Each farmer should determine by actual experiment on his own farm what manner of sowing is best adapted to his particular locality and condition of soil.

In my own experience, here in southern Illinois, I find that when clover is to be sown on wheat the best time is between March 1st and 15th. When sown at this time the alternate freezing and thawing of the ground renders it sufficiently porous for the seed to work downward to the proper depth to take root while the action of the frost and early spring rains generally covers the seed enough to insure germination. When freezing and thawing does not cover the seed sufficiently, it is well to run a light harrow over the ground after sowing and follow with a roller. I sow about eight pounds of seed to the acre, but if it tests below ninety-five per cent germination I sow ten to twelve pounds.

I find it not good practice to pasture the clover the first fall after sowing. However, this may be done occasionally without injury if there is a good growth and the ground so dry that stock do not tramp it too deeply. If a crop of hay is sought the field should not be pastured in the spring. **O. F. TAYLOR.**

### Agricultural News-Notes

Chicago is now admitted to be the best place for extensive operations in grain and provisions.

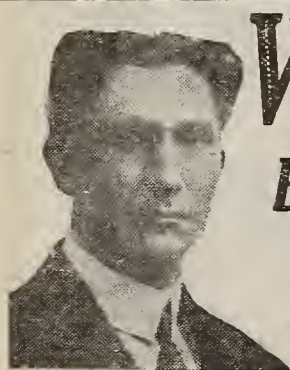
An old agricultural proverb—and there is no better—is this: "Grass is the Mother of Arable Crops."

The Commissioner of Agriculture of South Carolina says that the Colleton County truck farmers along the Charleston and Savannah Railroad average a net profit of forty dollars per acre.

The secretary of the Interstate Cotton-Seed Crushers' Association now has but little doubt that the soy bean will, before long, materially affect the markets for both oil and meal.

The apple crop of Nova Scotia last year was estimated at seven hundred thousand barrels. Most of these have been sent to England. One shipment of thirty thousand barrels was made to Africa.

Houston, Texas, has now become one of the main distributing points in the South for bananas and all other tropical and semi-tropical fruits and vegetables, including onions grown in Texas from Bermuda seed. \*



**H. C. PHELPS**  
Manufacturer of Celebrated Split Hickory Vehicles

## WAIT! To Buyers of Buggies Everywhere—Before Buying Any Vehicle Get My 1910 Free Book of Styles and Prices

**T**HERE are all kinds of general mail-order houses filling orders with buggies of unknown brand. There are all kinds of local dealers selling buggies at high-profit prices. I am the actual manufacturer of the celebrated Split Hickory Vehicles. Mine is a personal, man-to-man business. I make to your order just the vehicle you want (out of 125 styles) and sell it to you direct at factory prices.

The actual dollars-and-cents saving I make you runs from \$26.50 and up on a vehicle. I give

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All the papers and all manufacturers know me to be responsible and know my work to be the highest quality and prices the lowest. I have saved buggy buyers three million dollars in the last ten years. My big volume of business permits me to offer greater saving prices for 1910. I want to hear personally from anyone wanting a high-grade vehicle or harness. I issue this challenge to buggy dealers everywhere—I will duplicate the quality of any high-grade buggy they offer to any buyer at 25% or more off their price. If you are going to buy a vehicle, don't you want to save that 25% or more?

Let me prove this claim by sending you my 1910 190-page book quoting you direct factory prices. The \$26.50 to \$40 I save you is worth as much to you as to a buggy dealer, even though he's your brother-in-law or favorite friend. Then, why not find out about my proposition before you give away this money. I offer more than any dealer—30-day road test.

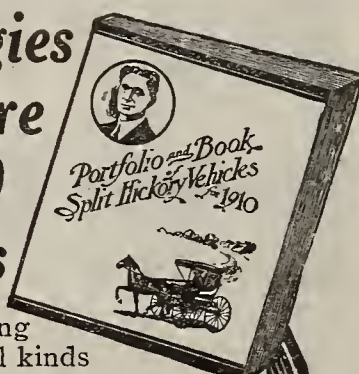
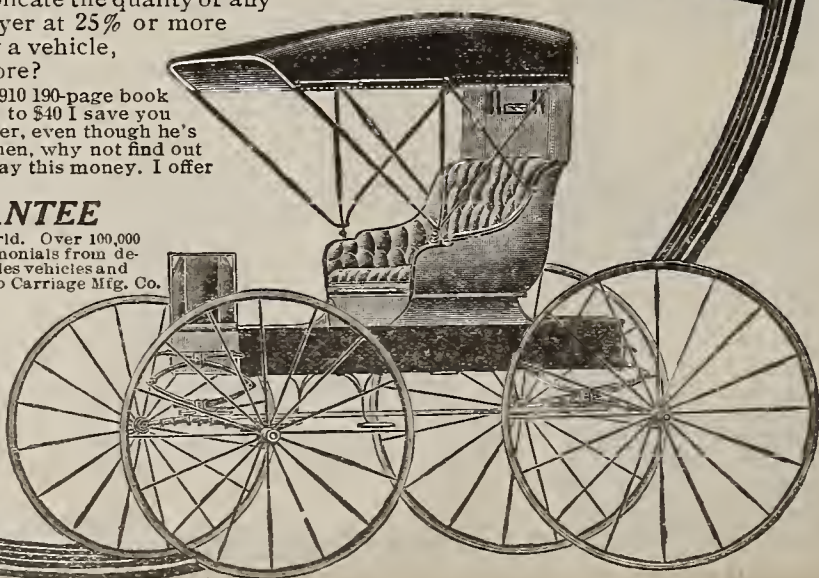
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# Farm Notes

## The Making of a Sugar Camp

**T**HERE is something fascinating about getting out in the woods around the camp-fire, when the sun makes the first attempt to make the woods spring-like, for springtime always appears in the woods first. This pleasurable feeling of being out in the woods in the sun's warm rays, when on the plains the icy wind swept, coupled with some orders for some real sugar-maple molasses and the prospect of a fine young camp in the near future, tempted us to "tend the camp." The first year we did not care to go to much expense, so used kettles to boil in, but we bought galvanized buckets and metal sap-spouts, or "spiles." Our product sold readily at one dollar and twenty-five cents a gallon.

Our trees were mostly young, from sixteen inches down. We tapped something like seventy-five the first season. In the part of the woods where the large timber stood thinnest there were what we had always called thickets, a dense growth of young trees, from three inches in diameter down to mere switches. Upon examination we found hundreds of young sugar-maples among them. We at once put a man to work, with a sharp ax, thinning out the useless and undesirable species, leaving only sugars, mulberry and occasionally a black walnut or poplar where they were not too close to the sugars.

The second season we bought an evaporator pan and rocker furnace to fit, several more galvanized buckets and a galvanized tank, for storage, such as is used for watering stock.

Our camp is not enlarging very fast, but promises to be a fine one in a few years. The trees run in sizes, so that new ones are taken in every year, and some of the larger young ones we use two buckets on, one spout to the bucket. But one must use care and not tap too young or too heavily; experience only can tell one the size to tap, depending on the top, as well as to the body. We have some hardy old trees which we use three spouts on.

We have a shanty under which we put our evaporator. The ground is very rough in places, so we use one horse and a sled, with a barrel wired securely on; the barrel is laid lengthways on two bolsters cut concave, so the barrel lies snugly. We have a narrow road cut through the bushes, over which we make regular trips to collect the sap.

We put the storage tank in the lowest place handy to the camp. When we wanted to empty our barrel we pulled up on the little elevation near-by, took a piece of steel roofing which we used to cover the tank with, slipped it under the end of the barrel, pulled out the bung and gravity did the rest, the piece of roofing taking the place of a lead-trough.

We have the regular sap-pails with-out bails and also galvanized buckets. For those who do not use covers, the buckets with bails are best, both ten and twelve quart sizes, for some trees run much more sap than others; but for those who have a fancy trade to supply, covers are indispensable, for, with these, rains and snows "cut no ice."

We are aware that there is a difference on which side a tree is tapped. We figure on south sides for early runs and north sides for late runs. Last season we used a patent "spile," one with which the hole could be freshened with a little larger bit; they prolong the season considerably, and, of course, it is a question, answerable only by experience, whether they injure the tree more than others. For ourselves, we are willing to risk them.

Just how long it will take for the young sugars we "helped out" to come to tapping age we cannot say, but they are coming very fast, and we know of no better way for the making of a sugar camp than to protect the older trees and help out the younger ones.

OMER R. ABRAHAM.

## How Good Planting Pays

[CONTINUED FROM PAGE 5]

bows so as to create an impression of distance and of a broad expanse. If there is a beautiful view from a porch or window of the house, great care should be taken not to hide it, but the tree should be so planted that the view may be seen through a charming vista of green.

The property-owner who has any real appreciation of the value of good planting, both as it affects his pocket-book and the moral and intellectual growth of his family, will not be contented with

laying out his own grounds properly, but will be interested in the development of the entire village along the same lines. The cash value of this course is not difficult to appreciate, because, as every one knows, a prospective purchaser is influenced in a very large degree by the character of the town itself. If the latter has wide streets and well-kept house plots, shaded by beautiful elms or maples, the visitor is invariably well impressed with the character of the village.

Particularly should this interest in village planting extend to the school-house. Prof. H. F. Major, of the Illinois State University, writes: "The matter of the country school-house is one of deep concern. Our strongest impressions are those formed while we are young boys and girls, and our impressions are largely those of association. I know a little country school-house in New York where a dilapidated, snaky graveyard occupies what should be the recess grounds and ball-field. Can you imagine anything more discouraging to the little boy, tired out with a morning over his books, than to come forth and have death staring him in the face, and always to look back upon the associations of his childhood only to see a graveyard hanging around the neck of memory?"

See to it, then, that the school-house grounds are made attractive by the planting of trees, not on the playground or the lawn, but around the edges, so as to properly frame the picture.

Mr. O. J. Kern, superintendent of the schools of Winnebago County, Illinois, has been giving this matter his particular attention, and when one considers the transformations which have been wrought in some of the school grounds in Mr. Kern's district, one realizes the need of making school grounds attractive.

Still another feature which should receive the attention of every resident is the railroad station, which is really the gateway to the town, and from which the visitor receives his first impression of what the town is like. Public opinion properly expressed is almost always able to induce the railroad to provide for the laying out of pretty and attractive grounds around the railroad station.

Finally, let me say that the farmer should not be frightened by the expression "landscape gardening." It does not necessarily mean either the employment of a high-priced expert or indeed of any expert at all. Neither does it mean the necessity of purchasing a lot of costly trees and shrubs. In its essence, it means only the arrangement and planting of growing things of any kind according to a few well-known principles which combine to produce artistic and tasty effects.

## Repaint Before Decay Begins



**T**HE time to repaint is before the old coat has worn off. To delay is to invite damage by the weather. Then the money apparently saved by not painting may have to be spent for repairs. After that the painting has to be done in addition. This can hardly be called economy.

But to keep buildings always well painted with good paint is true economy, for good paint both beautifies and protects.

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Paint made of substitutes for pure white lead soon cracks, scales and drops off, allowing dampness to reach and rot the wood. Then the poor paint must be scraped off before a new coat of good paint is applied. This means unnecessary expense which may always be avoided by starting with paint made of our pure white lead ("Dutch Boy Painter" trade mark).

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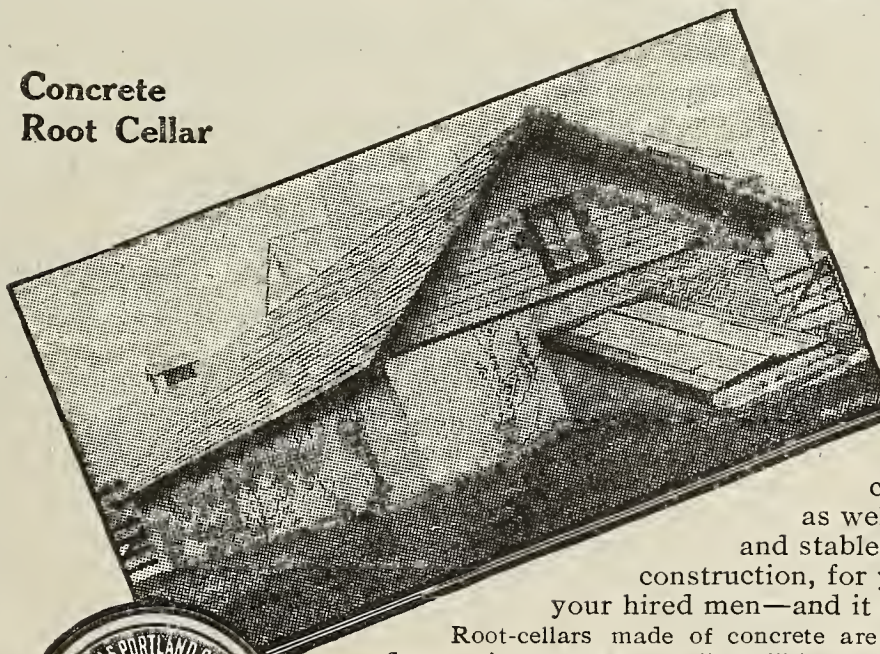
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## Spring's Work in Politics

IT is now only a few months until the campaign will begin for the new Congress. The open campaign is meant. The underground activities through the subways of the machines is already in full blast. The farmers of the nation should wake up now if they expect to be influential outside the ratification meetings.

There are machines and machines. No practical man objects to a machine for doing political work any more than he does to a machine for doing farm work. They are both necessary. A machine is simply a tool. Tools are requisite to all sorts and every sort of important work. It is too late in the centuries for us to quarrel with machines as such.

Apolitical machine is designed for the putting in effect of the will of the majority in a party. So long as it does that it is a thing with which no one can justly find fault.

But when the machine is so organized that the majority find it hard to get hold of it—when there are some few strategic hand-holds like the old-fashioned caucus and convention, which have room for only a few hands—why, then, this machine for registering the will of the majority is easily seized by a minority and used for quite other purposes. The plow is set beam-deep in the unrequited wheat, and the good machine becomes destructive just in proportion to its efficiency.

FARM AND FIRESIDE cares nothing at all for party. It does not for party reasons advocate or oppose any political measures. Its attitude is determined by other than party reasons. But it does care to urge upon the farmers the necessity of their making themselves felt in the politics of their various states. Too often the political action of country precincts is dictated from the county seat. It should not be dictated from anywhere. If it is, the dictation of the county seat is perhaps quite as good as any.

If your congressman supported Mr. Cannon, you should support him on that point if you believe that was the right thing. Otherwise, you should oppose him. In no case should you be supine and inactive.

There are many important measures now before the nation upon which you should be heard. Few of them are party measures. In fact, party lines seem to have been irrevocably crushed and lost. Whenever in the last Congress Mr. Cannon or Mr. Aldrich really needed votes from the so-called opposition, they seem to have been able to get them. Whether we believe in the tendency or not, we seem to be entering a period of realignment of parties. In such times independence of party lines grows, because party designations have lost their meanings. No man can be loyal to a flag which means one thing in Georgia and another in Oklahoma, or one thing in Rhode Island and another in Iowa—especially if the one flag happens to mean the same thing in Rhode Island that the other means in Georgia.

Out of the confusion the farmer should emerge with a clearer notion as to how his congressman stands on things related to the interest of the farms. In most things the interest of the farms is one with that of producers of all sorts. Farmers are primarily laborers, and their interests run against those of monopoly just as those of all laborers do. But they are especially interested in grain inspection, parcels posts, postal savings banks, rate regulation and many other matters. They should begin to get a hold upon their party and its agencies for registering the popular will right now. They should not allow plans for spring's work to prevent them from a little pruning and trimming in the political vineyard.

\* \* \*

As the cost of living soars, I wonder if folks will live on higher planes.

Who cannot live a big life in a small house would live small in a big one.

How can any one look upon the new-fallen snow without wanting to be white?

When a man really knows himself, the biggest mystery in all the world to him is how a woman can love him.

I know a man who is always laughing about the tricks he played when he was a boy, and flails his kids for doing the same sort of things now.

One thing men can never understand is how a Ladies' Aid Society can do so everlasting much talking and manage to do so much good work at the same time.

Don't be too busy to see that the water-supply is plentiful and pure. Neglect in cleaning the well, spring or cistern may cause death or a costly illness. Get the water tested. Pure water is of prime importance to farmer and stock; and see that both get plenty every day.

## The Uselessness of Forests

PROF. WILLIS L. MOORE has joined the ranks of those who deny the usefulness of forests as regulators of stream-flow. Mr. Moore is at the head of the Weather Bureau—a place which he won by proficiency as a weather forecaster. His skill in gaging the influence of forests is yet to be determined. Colonel Chittenden of the army—a noted river engineer—takes the same position. In fact, the question has become a debate between the engineers of the Geological Survey, the Forest Service, the Reclamation Service and the conservationists generally, one the one hand, and the army engineers, the water-power forestallers opposed to the new Rooseveltian policy of looking closely after the public domain—people like Mr. Mondell of Wyoming—and Professor Moore on the other. The ordinary reader is unable to see just why the controversy should approach bitterness, as it has at times. Why should these specialists become heated over the question of the influence of forests on the floods, the low-water periods and the washing off of slopes? It would seem a question of pure science in which no one can have any selfish interest.

But there are selfish interests involved, just the same. The water-power people do not want the foresters to control the headwaters; for one reason such control gives state and national governments rights in the stream-flow which the selfish interests demand the relinquishment of, in the interest of unlimited private control of power. In Wisconsin the question of licensing dams, of taxing horse-power for the maintenance of forest reserves and like regulations has become acute, with the water-power owners and their friends arrayed against the state Conservation Commission.

In national affairs the influence of forests on stream-flow will be the one on which must stand or fall the conservationist plans for creating a great Appalachian and White Mountain Forest with a system of reservoirs for controlling flood waters. If the reforestation of the mountain-slopes will protect the rivers from being washed full of mud, will make the streams less liable to go wild with floods and then run dry with drought, then the United States Government has a constitutional right to acquire these mountain ranges by purchase, to reforest them, to dam back the flood waters and to use the water-power thus created in industrial development.

Unless these projects will thus aid navigation in the rivers, this right does not exist. This explains why so many great interests are opposed to the conservation projects of the Roosevelt régime—this among other things. Mr. Leighton, of the Geological Survey in 1907, published a great report showing the millions of horse-power thus to be developed, the mitigation, if not the abolition, of the destructive floods in the Mississippi, the Ohio and many other rivers, and the deeper water for navigation which would result. He has been jumped on by some honest engineers, by every interest that hates to see the government doing things which corporations would like to do for profit. But the consensus of scientific opinion, as well as of educated common sense, seems to show Leighton, Pinchot and their fellows to be right.

## The South "Waking Up"

IT HAS long been the fashion to say that the agriculture of the South will one of these days wake up. A trip through the South will convince the most skeptical that Dixie is already broad awake. The plantation is gradually giving way to the farm. Negro labor seems tending in many localities to farms owned by negroes, and the work is gravitating to the owners and their families as in the North—plus hired help. The day of the princely is passing.

All around the Gulf is a rim of level lands which have been cut over by the lumberers, and now lies mostly unimproved and sparsely settled. The soil is apt to be sandy. The cotton plantations have been in the hills of the interior rather than in the pine lands of the littoral. But now the working farmers of the old lands are descending on the plain and opening up small cotton farms.

The orators of the South are prone to refer to her soil as fertile and her climate kindly. As far as climate goes, nothing could be truer. There are copious rains and warm suns, and the conditions for plant growth are climatically ideal. But the soil may be termed fertile only by comparison. Compared with the lands of Iowa or Illinois or Indiana, much of the soil of the South may rather be termed hungry. It needs humus. Where nitrification goes on most of the year this must almost inevitably be so. But the new farms are many of them being operated as cotton-factories, into which fertility is poured after being bought, and where scientific and intelligent methods are being pursued with splendid results. The South is learning the soil-builder's trade.

Alongside the working farmer of the South is settling the dairying and stock-raising husbandman from the North. The writer has just seen in southern Alabama a model dairy barn built to put into effect every economy, where cow-pea ensilage is fed, and the soiling system will be used. Though built and operated by Texans, it would be a model plant in Wisconsin. There will be no pasture. It is expected that a man, his wife and one hand will take care of twenty cows, cutting their feed in summer, filling the silos and hauling out the manure every day. At the Omaha Corn Show the Tennessee exhibit was assembled and exhibited by two farmers. One of them was a native Tennessean who runs a hundred-acre farm with his own hands.

Such instances richly successful of non-cotton farming are multiplying everywhere. The Northern farmers who go into stock in the South will find the sons of the soil plowing in the adjoining fields.

Everywhere in the South the tendency toward agricultural education in the common schools is marked. Corn-judging classes of school-boys are numerous and active. The study of farming and planting is becoming fashionable. The South is awake. Inevitably it must receive the surplus population of the North. It is prepared to receive it with open arms, and to give poor men a chance. It takes more capital to start successfully than on a prairie, for there are stumps to pull and some new things to learn—more than on a black prairie soil; but, for all that, the next West will be the South. She has her problems, but advanced agriculture has their answers already on the slate.

\* \* \*

SWEET clover is a wayside weed. Most people think it a pest. We are beginning to see that it has noble qualities. An orphan asylum in an Ohio city refuses to tell people adopting children from it anything about the parentage of the orphans. Whether sprung from wayside weeds or from the budded plants of hereditary culture no one about the child knows. The results seem to show that most of our common human weeds are precious plants so long as no one can call them weeds and prove it. To have wasted the melilotus for so long is a blunder, perhaps, but how much greater the tragedy when we recklessly tag a human being as bad and thus make him so. And are we not doing this all the time?

Perhaps in the last analysis there are no really noxious plants—nor bad people.





# The FARMERS' LOBBY.

By Judson C. Welliver

I HAVEN'T been able to help wondering lately how any of the FARM AND FIRESIDE family realize the extent and significance of the effort that is afoot to unload upon the farmer and the soil the responsibility for high costs of living. You must have noticed that the newspapers have been full of stories about the "record-making" prices of grain and hogs and steers and eggs and poultry and everything that comes from the farm. Along with this you will hardly have failed to observe that everybody, from the cartoonist to the high-browed editorial writers, has been quietly but diligently and systematically engaged in "putting it onto the farmers."

There is, for example, the somewhat passé and altogether overworked joke about the Kansas farmer selling his nine bushels of wheat and after getting all the money the elevator man had handy, taking an automobile in lieu of small change. The really up-to-date cartoonist has saved his typical farmer, put him into a dress suit, emblazoned his shirt-front with a diamond the size of a lump of chalk and presented him, in short, as the real plutocrat of our times.

All this is interesting and in a wise flattering to the farmer. But if he will think it over, particularly in the light of a good many things he would know if he were here in Washington, he will realize that it isn't necessarily advantageous to him. He is being made the scapegoat for the difficulties of living in cities.

The worst of it is that the farmer is being flouted as a rather hopeless person whose offense is more in what he doesn't know than in any purpose of offense. We are constantly being told that it is the farmer's ignorance of how to farm rightly; his unwillingness to learn and his indisposition to stick to his job that have brought us to this pass.

You will meet in the cafés of Broadway or the drawing-rooms of Washington very wise people who never saw a farm except from a car-window, who will assure you that "we've got to do something to the farmers." It will be presented in the most positive fashion that the rural population is attaining a station and a power which menace our liberties, or at least our right to lobster à la Newburg after the opera.

Now, this is going to be a serious matter unless it comes to be understood that something very like a propaganda is going on, for the purpose of unloading on the farmer something which he isn't responsible for. Read the big city newspapers; read the interviews of men high in business and finance and rail-roading. You can't doubt that I am right when I declare that the responsibility is to be unloaded on the farmer.

\* \* \*

AND who is unloading it on him? The people who are really responsible. The people who have watered stocks till they have made the incorporated concerns of the nation such a burden, with their fictitious capitalization, that they demand and get excessive charges for their services and their products, vastly more than would earn a reasonable return on an honest valuation.

Every time an enterprising promoter in Wall Street, or some of the outlying provinces of Wall Street, gets hold of a "proposition" and inflates its capital, and then sells the inflated shares, he is adding to the excessive cost of living. He is fixing himself and his partners in the ownership of these shares, to earn dividends on investments they never made. If it is a telegraph and telephone merger into which he injects a half-billion of wind, the rest of us pay for it in our rates on telegraph and telephone conversation that will produce returns on that half-billion. If it is a steel merger, with \$400,000,000 of values and \$1,400,000,000 of capitalization, we will pay the interest on the unjust billion when we buy barbed wire and harvesting machinery and tedders and mowers and nails and hair-pins and steel rails and pressed-steel cars.

And now the amiable gentlemen who for many years have been carrying on that particular sort of business are finding the inevitable result: The excessive charges we are all compelled to pay them have forced us all to demand a little more for our own products; the "cost of living" has gone up—and these cheerful people announce that the inhuman farmer has done it!

Personally, I can't scare up much sympathy for the farmer. He has been the easy and willing victim of a certain type of high-protection argument skilfully arranged to appeal to his self-interest. The agricul-

A New Fairy Tale for Grown-Ups, Entitled: "The Wicked Farmer and the Poor Consumers" . . . . .  
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Fictitious Finance Raises Prices for Everybody  
. . . . . Federal Supervision of Grain Grading—A  
Measure That Ought to Pass . . . . . Modern Sleight of  
Hand: When is No. 1 Wheat Not No. 1 Wheat?

tural communities were the last ones to be aroused against the excesses of a tariff system which had long since ceased to be protection for industry, and had become protection for monopoly and extortion. He was told that these excesses of protection helped to make his own market, and he accepted it without much question. Now he finds himself charged with the evil results of the whole gigantic conspiracy against a fair distribution of values and services, and although he is less to blame than anybody else, he is likely to find himself the object of reprisals before long.

\* \* \*

THE unofficial cost-of-living investigations are not confirming the prominent citizens who have expressed, in print, their grief over the grasping nature of the farmer. In fact, the testimony seems to be going to confirm what the farmer knows by painful experience—that the consumer's dollar is worn pretty thin by the hands it passes through on its way to the ultimate producer. If the investigation could be extended to cover a comparison of the farmer's share with his present-day expenses, it would give us another striking contrast.

The official investigation applied to the Beef Trust is likely to throw still more light on that dollar's misadventures. How would a physical valuation of the packing plants do for comparison with their earnings? It is to be hoped, too, that the "nation wide" investigation will compile complete data as to the average wealth of the fellows who haul the cars to market, sell the stuff in the yards, slaughter it and sell it over the counter, as well as that of the fellow who acts as valet de chambre for the hogs and steers from their earliest and wobbly youth to the time when they descend the chute at the station. That would be interesting.

\* \* \*

WHILE we are on this question of the farmer's responsibility for living conditions, a particular case comes to mind. For a half-score or more of years efforts have been made in behalf of an honest grading and inspection of grains. Practically nothing has been accomplished, but the chairmen of the committees on agriculture in both houses of Congress are this winter hopeful of getting some legislation passed.

The farmer sells his wheat, for instance, according to the grade the buyer arbitrarily fixes for him. When he has sold, the wheat goes into an elevator at his market town, and thence to a great central grain market—Minneapolis, Duluth, Port William or Buffalo. There it goes into terminal elevators, to be cleaned, mixed, speculated in, and finally taken out and sold to the millers or for shipment abroad.

If you want to know what happens to the farmer, watch the wheat which goes into and the wheat which comes out of one of these terminal elevators. A report on one elevator, in a Minnesota city, showed figures something like this, on a year's business:

|             | Wheat Received | Wheat Forwarded |
|-------------|----------------|-----------------|
|             | Bushels        | Bushels         |
| No. 1 ..... | 3,000,000      | 8,000,000       |
| No. 2 ..... | 4,000,000      | 4,000,000       |
| No. 3 ..... | 8,000,000      | 3,000,000       |

That is to say, more than half the wheat taken in was at the lowest grade; four fifths of it was at the two lowest grades. But when it came out to be sold, lo, four fifths of it was of the two highest grades, and more than half was of the very highest grade.

That simply means that when the buyer is buying he under-grades, and when he is selling he either raises the grade to an honest figure or actually over-grades. The farmer loses the difference in price between the honest grade his wheat ought to have received and the lower one it got.

SENATOR McCUMBER, of North Dakota, has for a long time been insisting that the federal government ought to take complete supervision of the grading and inspection of grains, just as it manages the inspection of stock and meats, and just as it administers the pure-food laws. The other day I asked him:

"Are you able to estimate, senator, the losses the farmers sustain by reason of under-grading of their grain at the primary markets?"

"I have never been able to get data on which to estimate it for the whole country and for all grains," he replied. "But for my own state of North Dakota I have made a very careful estimate, on the basis of carefully collected and verified data, relating to our wheat alone. I find that the under-grading of their wheat costs our farmers just about \$1,000,000 a year—an average loss of about three cents a bushel. Conditions may not be so serious in some other states; they may be worse in some. But, generally, they apply everywhere and to all sorts of grains."

Senator McCumber was particularly explosive on the subject of the effort to blame the farmer for the advancing costs of living. "The very people who have their hands in the farmer's pocket are the ones who are chasing along just behind him shouting, 'stop thief,'" declared the senator, "and one of the most effective ways of getting his wallet away from the farmer is this very one of dishonest grading of grains."

Years ago Senator McCumber got a small appropriation made to pay the expenses of a scientific study of the grading of grain. Secretary Wilson took it up, and his experts made a careful study. They found that the scientific grading of grain should be based on determination of the size and uniformity of the kernels, the proportion of moisture in the grains and the amount of foreign or waste matter.

Apparatus was then invented to determine, mechanically, all these elements with almost absolute accuracy. It has been substantially perfected, and tests made at a number of ports of export have shown how very faulty is our system of grading at present.

Last session of Congress the agricultural committee of the Senate reported the McCumber bill to establish federal grading and inspection. But it never got before the Senate. Now the committee is taking up the measure once more, and Senator Dolliver announces that it is going to be reported and that he will fight to force a vote on it. The chances of its passage this year are not, however, good. In the first place, it isn't spectacular enough to cause much excitement. In the second place, the farmers aren't organized to force their demands upon Congress, as the railroads or the manufacturing interests do. Finally, this talk about the "plutocratic farmer" that we have all been hearing lately has caused a certain revulsion against the old buncombe of "doing something for the farmer." The feeling is getting strong that the farmer doesn't need anything done for him—not even justice. And there you are.

\* \* \*

ONE of the worst things about our system of grading grains is its effect on our foreign market. No. 2 will be bought from the farmer as No. 3, but it will be mixed, in the elevator, with a proportion of No. 1, and the entire lot shipped as No. 1.

The miller in England or France gets it. At the same time he gets some Hungarian, Russian or Argentine wheat, also certified as No. 1; but he finds that the Hungarian, Russian or Argentine No. 1 wheat is better than American of the same grade. Therefore, all American gradings are discounted. If you get the best ship-load of No. 1 Northern wheat that ever came out of Minnesota and ship it to France, it will not sell in France for as much as the corresponding grade of wheat from South America. Why? Because there has been so much dishonesty in the grading of American grains for the foreign market that nobody will accept them. There is a pretty well established ratio of discounts, and all American wheat, honest or dishonest, has to stand the shave.

There seems to be, in the case of grains, only one remedy: Federal grading and inspection, by the accurate and scientific processes which have been invented for the purpose, with severe penalties for dishonest gradings. Then the American farmer will get an honest price, and American wheat will be accepted as an honest ware in the markets of the world.



# The Call of the City

By Richard M. Winans



A little sweat-shop worker

She was tired of the horrid old farm!

Well, who wouldn't be, with its mud and its gloom and its isolation, and nowhere to go and no way to get there.

It was nearing spring, with its thaws and rains that kept her indoors days on end, offering little encouragement or promises of the happy, care-free life that Mabel craved so much.

Father was generous and

mother was always full of heart-sympathy, and brothers and sisters were kind and loving, but how could they understand her soul-longing for a broader atmosphere? How indeed, for had they not always lived their quiet lives on the farm, knowing nothing of the enjoyment to be had in the whirl of real life in the gay-thronged streets, as she had tasted it in that memorable visit to city relatives?

There were the operas and the theaters and the parties and the endless other social amenities all of which could be made a part of her life for the mere trouble of reaching out and taking them.

It was the old, old call of the city, reaching out with its vibrant voice to the unsophisticated country girl to lure her away from the protection of the sheltering home-tree.

She would, of course, have to work a little to provide means with which to live and dress becomingly.

But in this city there was always work in plenty, easy work that any girl could do, and the pay was very liberal—big wages as compared with the skimpy, stingy little sums they paid in the bucolic wilds of the country.

The work would be only an incident, however; the main thing would be the world of amusement and pleasure in which she could live her dream-life and soon develop into the polished lady to be eagerly sought and done homage to by Prince Charming and the host of other knights.

The city called, and she answered. Remonstrances were of no avail. Heart-pleadings fell on deaf ears. Advice was wasted. She knew!

But it was not all that she had dreamed of it, after all.

She had no training for a business career and her course of country schooling had not fitted her for office or any clerical work, nor for any branch of the industries, in which women find more or less paying employment—and to go into service as a domestic, never!

Beside, she knew absolutely nothing of housekeeping or domestic economy; for hadn't mother always attended to all that, so her precious time might all be devoted to study and reading and music and a jolly good time.

She aimed high for employment in the beginning, as all of her class do. But the lines she sought to enter were already filled to overflowing by "professionals."

But when the time came that her pitiful little fund of money was nearing its end, and there was room rent to pay and food to buy—and an empty purse, she suffered her pride to apply for such work as she could easiest get.

Yes, there were "Girls Wanted;" there always are, especially those with the strength and the spirit and vigor of the country fresh in their veins; girls with their working capacity yet unimpaired by the killing pace of the city.

It was a weary, weary tramp through dismal days among the shops in the gloomy, unattractive district where girls are most employed, before her application for work finally found her a place at the simplest kind of machine sewing, in a factory where hundreds of other girls were crowded together in close quarters and in a stifling atmosphere, with dim gaslight as a substitute for the sun's rays that seldom lighted the cheerless, somber room.

The wages were three dollars and fifty cents a week, with long, busy, toilsome hours, with no time for rest at lunch-time, and a body too wearied for recreation at night.

It wasn't just what she had expected; but conditions she knew would improve as she grew acquainted with her surroundings and was able to obtain a better position and a better salary. Then she would begin to live life, instead of only existing to labor.

Ability through practice to work faster secured to her better wages in time; but ability through teaching or training to do a higher class of work at higher pay, never. Such a course is not a part of the system of the sweat-shop.

If all girls were properly trained in the industries, in every branch of their trade, from what source would the "sweat" shops obtain the multitude of cheap female labor to do their class of work? A part of it, it is true, from the immigrant horde that come willing to work for what to Americans is starvation wages. And such wages are largely due to them.

Universal industrial education and training would sound the death-knell of the sweat-shop as it is conducted to-day. They must depend on the great army of the unfit, the untrained, the unprepared and the unfortunate from which to constantly recruit their forces, for worn-out bodies and shattered nerves invite diseases that go on relentlessly year in and out, rapidly thinning their ranks.

And the pity of it is that there are always idle thousands ready and waiting to step in and fill the breach.

Mabel soon learned that in the lives of these sweat-shop workers there was ever more of misery than comfort, more of restlessness than content, more of sorrow than pleasure, more of tears than smiles, and where on rare occasion the curtain rises on a romance it ultimately falls all too often on a pitiable tragedy of life.

The girls who have homes in the city are far better situated than those who are alone and dependent upon themselves, as the unbefriended country girl must necessarily be, for in the city desirable associations and even acquaintances are not easily formed, and so among the teeming multitudes the girl alone remains a stranger to its people, very lonely and very desolate indeed; or she may find, and she too often does, associates which were far better never known.

The girl is fortunate who is able to afford even a cramped little hall bedroom by herself. That will cost her one dollar and fifty cents to two dollars, even in the cheap renting sections, and unless she rooms within walking distance the car-fares will take another sixty cents a week. Since her wages average from four to five dollars a week, according to the class of work, there is little enough left with which

or recreation. Most of them are scantily if not shabbily clad, their faces lack color, and the expression is one of dejection and often suffering.

They are slaves to the conditions of their environment, in sharp contrast to the fortunately situated girl in the country, with the pleasing surroundings of a home that is a home in fact, blessed with friendly associates and happily able to enjoy her innocent girlish romances, free and untrammelled, with the world at her feet and all Nature at her service.

This story of one girl who went to New York from a country home some years ago and found work in the shops is only a duplicate of hundreds of others that might be told. Young and strong in the beginning, she was able to make fair, though little more than living, wages. Crowded out by new recruits, and with little work and scant pay, the earning of a bare existence in a bleak tenement-house room was finally beyond her, and starvation or the poorhouse was all that was left to her—all but one other way. Penniless and despondent she sought the river in which to forever forget the world and its misery, when a man offered her a solution of her struggle to live, and she accepted this way out. The wages of her trade seldom fail, this vocation of dishonor whose ranks are filled with the unfortunate country girl unable to win in the city's battle for bread and too weak to fight alone.

Another story, in the news of the very day this is written, tells of a girl who came from Georgia to New York City two years ago and who found death the easiest way to escape hunger, suffering and the humiliation attending defeat after a plucky struggle to succeed by work in the shops. Her pride forbade her asking assistance of strangers. She was out of funds and confronted with starvation. Where they found her dead in her room there was but a single soda biscuit and a half-filled bottle of soured milk on the little rickety table. Her stockings and underclothes were patched patch upon patch until there was no groundwork in which another thread would hold. Her Southern sense of honor pointed this way out to her, and who shall say it were not the better way!

The pitiable conditions under which these poor girls work and live! It would needs require the pen of such a master as Zola at his best to picture the shop girl's life and the misery and suffering that follow close on her trail.

As in the experience of thousands of other girls not only were Mabel's ideals of a life of enjoyment in the city rudely shattered, but when spring came again it found her in the charity ward of a hospital, victim of the dread typhus that comes to hundreds who work in the stuffy rooms of the shops.

As she lay sleeping at evening a nurse stopped silently beside the cot to see that all was well before the bell should tap "lights out." Looking, she saw the little pale face upon the pillow glorified and made radiant with a smile; such a smile as brightens the face of the infant in the after-glow of a mother's kiss.

The thin fingers clasped and unclasped nervously as they lay on the snowy counterpane, and the smile rose to a benediction that almost made its halo felt in the darkened ward as the lights were lowered.

At last the long and lonely silent night had passed on its course, and day was softly rustling her awakening wings while the morning stars sang together, and their ethereal notes still flooded the pearly film of dawn when a budding rose blushed in the East, and from its full-blown heart emerged the great god of light to warm and cheer his multitudinous protégées, the children of men.

And with the night had passed also the fever and pain so patiently endured by the little sufferer—vanished into the morning mists before the mystic magic of a mother's touch. For mother had come, and she was, oh! so glad now to go back to the beloved surroundings of the dear old farm.

It was a journey soon over, and in her eyes were tears of such joy as she had never known before as she hugged and kissed the welcoming folk at home. Nor was Rover or the ponies or her other animal friends forgotten in her joyous greeting.

Oh! but wasn't it good to be free of the city's toils, breathing the pure air and wading knee-deep in the bright sunshine and sweet scented clover-fields, and good to see the faces of loving friends and to hear their voices and receive their caresses after the cold, indifferent city, and to eat one's fill of a real dinner once more, and to ride and drive and to come and go as one pleased, to scent the flowers and hear the rippling song of the birds, and—Oh! wasn't it good to be able to appreciate this taste of a real earthly heaven again, surrounded by glowing cheer and brightness and peace and love and genuine happiness and content, and wasn't it, oh! so good to—

"It is time for your medicine, girlie," and as nurse bends over and awakens the little form, a warm tear trickles down to the pillow over the pallid cheek, the lips quiver and the hollow eyes are filled with a pitiful heart-touching appeal as the faint voice whispers:

"I want to go home!"



A group of girls at work in a New York sweat-shop where sunshine and fresh air are almost unknown

to buy even the simplest foods that she may prepare in her room and which seldom are nourishing.

There are something like two hundred and fifty thousand girls and women employed in New York City alone, mostly in the manufacture of men's and women's clothing, a large per cent in the sweat-shops and the remainder at piece-work in licensed tenements and in homes, where children too young for the shop are made to work, and thus avoid the child-labor law.

The cities have leagues, societies, associations, committees and alliances without end, and laws on laws are passed looking to a betterment of these conditions, but advocate reforms and legislate as they may to change the methods of these shops and the sweating system in general, the fact still remains that the cause underlying the whole trouble is with the condition of the laborer, with the people themselves, for so long as the cities are filled with the waste forces of human nature unfitted for higher employment, and industrial incompetents unable to utilize their minds and hands skilfully in the trades, just so long will work of this class be found for them to do—and more to do the work than can be used.

That the waiting list is large was voiced by a foreman, when his attention was called to the fact that a leaking roof was letting the melting snows trickle down a wall close by which girls were working in a crowded room, endangering their health, and he replied: "Oh, well, girls are cheaper than patches for the roof. If one drops out there are a dozen waiting to take her place."

The crowds of young girls that go at dawn to the sweat-shop quarter have deep lines on their faces, hollow cheeks and dull, sunken eyes not made by age, but by tedious, enervating toil, health-destroying work-rooms, poor and insufficient food, close, ill-ventilated sleeping-quarters and lack of refreshing sleep, with little or no opportunity for social pleasure



# SUNDAY READING

## Who Shall Judge?

By E. J. De Marsh

**P**UBLIC opinion! Grim arbiter of our fate! How many a promising career has been crushed in its deadly embrace, and yet what a weak, shallow thing it often is; never, I think, do we realize how weak and shallow until circumstances force us to withstand it. We should care what people say and think about us, and we do, but no man of moral courage will care more for what men say about him than for what God thinks and knows of him.

Public opinion may call one man a sinner, another a saint, and forthwith we execrate the one and bow to the other. Beware of judging for others. As a rule, each of us knows best what he can and should do, and every law of reason and justice may forbid that my criterion of conduct be yours.

Paul said he was "all things to all men" that thereby he might work good to many, but not for a moment do we believe that Paul, the straightforward, counseled hypocrisy and deceit. The idea he did mean to convey was that of adaptability, tact in dealing with men. A stern, unbending purpose, actuated by lofty principle, is well, but the man who cannot put himself in the other man's place and see with his eyes is doomed to disappointment. The mother or the teacher who remembers her own childish ways of looking at things is the one who best reaches the child-heart and draws it after her. That minister is most successful who can unite the dignity of the pulpit with the understanding of the pew; who, stainless himself, can yet enter, in fancy, the sin-sick and sorrow-stricken heart and there leave the peace which passeth understanding.

I used to feel that I could classify men as good or bad, according as they abstained from or indulged in sin or crime; now I know human nature to be so complex that such a view is both narrow and unjust. Oftentimes the world calls men evil when they are not.

Better far, my brother, leave judgment to the God of clear vision, omnipotent power and infinite love. And remember, the higher the spiritual state from which a man falls, the more poignant his suffering.

Over some lives God sees fit to allow longer shadows to be cast than over others, but because the shadows do lie long and dark, shall we murmur? Or if they be dark on our neighbor's life, shall we, by cruelty and condemnation, add to their blackness? No, a thousand times no. Christ died that we might have life everlasting, not that you or I might, but that we might.

How far shall we defy public opinion, how far conform to it? Just so far as common sense, justice and a progressive spirit dictate—and no farther. Do not dissent for the mere sake of dissenting.

nor yet conform merely because that is the easier way. The veriest coward may win honors because he fears the loss of prestige; the noblest hero may be despised and execrated or lie in an unknown grave, all because he declined to act other than honestly and in accordance with his highest moral convictions. "True nobility lies in being, not in seeming." Moral courage is ever at a premium. I admire the man who dares stand with his back to the wall, his face to the foe, and strike with telling force blow after blow for the cause of right and justice.

Some one has said that the man or woman who has no enemies never does anything worth while. Surely Luther, Calvin and Knox had plenty. Perfect as He was, Christ himself had enemies, bitter, vindictive ones, and that because He denounced the follies, the shams and the sins of the times. Some He met with kindness, some He ignored, upon some He poured scathing words of scorn and rebuke. Go thou and do likewise; condemn the sin, raise the sinner.

Our destiny, for good or evil, is ours to work out; we are "the captains of our souls." By what right, then, shall another mark out for us the path we are to tread or, judging by superficialities, declare that our life has been a failure? Success is largely a relative term and its standard established by local conditions. Looking down into the human heart, that life which shows duty well done, that life whereby other lives are made richer and stronger, can never be accounted a failure. God's scales weigh true. Not merely the thought, the wish, the desire, but the motive and the will which govern our acts are taken into consideration by Him.

Some day we must lay aside these houses of ours, but if we have ever borne in mind the purpose for which our lives were created; if we have acted from the highest impulses, the noblest aspirations; if we have done the best our circumstances allowed, we have little cause to fear what the judgment will be.

Human approbation is a sweet thing, my friend, but if you see far-reaching before you a high and holy purpose, faint not, falter not in your course, though every man's hand be against you. With firm and steady purpose, Christ kept on His lonely way, actuated only by the thought, "I must work the works of Him that sent me." There it is in a nutshell, "I must work the works of Him that sent me." We are God's representatives in this world and whatever our mission, great or small, all we do is to be done with an eye single to His glory.

You cannot love God too much; you cannot pray too earnestly; you cannot labor too diligently in a good cause. Give of your best, and the best shall come back to you.

## The Most Popular Hymn—Rock of Ages

**N**or long ago the hymns in one hundred and seven church hymnals were compared to ascertain which were the most popular, and it was discovered that no single hymn was contained in every book, but Rock of Ages appeared in one hundred and six books. Therefore, it should be judged the most popular. It was first published in the Gospel Magazine for October, 1775, in an article called "Life's Journey" in reply to one by John Wesley. In March of the next year he printed a revised form in the same magazine, and both of these contained four stanzas. Forty years later Thomas Cottrell condensed the four into three, and the latter form is now found in most collections. Two stanzas of the original version of the hymn are given below.

Augustus Montague Toplady was born November 4, 1740, at Farnham, Surrey, England. His father was a major in the English army, and died in the siege of Carthage, in 1841, when his son was an infant. The future hymn-writer attended Westminster School for a short time, then his mother moved to Ireland, and he finished his education at Trinity College, Dublin. He was converted at a barn service conducted by an itinerant minister, and after being ordained he preached several places before finally settling at Broad Hembury, where he remained until his death ten years later. He was editor of the Gospel Magazine

for some time, and it was in this paper that many of his poems and hymns first saw the light. Toplady died August 14, 1778, in London, and is buried under the gallery opposite the pulpit in Tottenham Chapel, that city. It is interesting to note that while a pupil in Westminster he kept a diary which is still preserved. Two entries are characteristic of the twelve-year-old boy: "February 9, 1753—Went to school all day. Jack Tempest owes me a penny." "February 10—He paid me." His theological writings are now mostly forgotten, and though a number of his hymns are still in common use, he is remembered chiefly as the author of

### Rock of Ages

Rock of Ages, cleft for me,  
Let me hide myself in Thee;  
Let the water and the blood,  
From Thy riven side which flowed,  
Be of sin the double cure;  
Cleanse me from its guilt and power.

Not the labors of my hands  
Can fulfill Thy Law's demands;  
Could my zeal no respite know,  
Could my tears forever flow,  
All for sin could not atone;  
Thou must save, and Thou alone.

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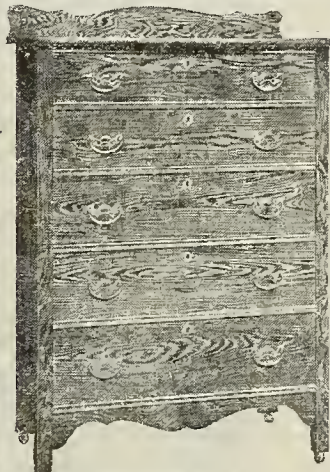
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# Miss Selina Lue and the Soap-Box Babies

By Maria Thompson Daviess

Illustrated by Ruth M. Hallock



## CHAPTER IX.—Smiling Through Tears

"Looks like a man must think his own life have been a grand success if he goes to a-directing of his son's."

—Miss Selina Lue.

"BLOSSOM," said Miss Selina Lue, as she seated herself in the grocery door for a breathing spell after all the bluff dinners had been discussed, bought, paid for and started on their ways to the different pots, "looks like women oughter think up something different onct in a while to feed to they families. The Dobbses have had boiled cabbage fer dinner now four months hand-running, and the Kinneys have et so many fried eggs that I begin to look fer all of their children to show pin-feathers."

Blossom looked up from the china doll she was busily licking with her small red tongue in a sudden access of affection. The Blossom was once more abloom and abob with enthusiasm.

"If the men folks have to put all of they lives into making of the money to live on, looks like the women oughter put a little common sense and elbow grease into helping 'em get some comfort outen it as they go 'long. Why, honey-bunch, wherever did you come from? I didn't see you up the hill." And Miss Selina Lue's face fairly beamed on Miss Cynthia, who came in from the back of the store.

"I came down the path and through the garden," answered Miss Cynthia.

"Well, I hope you noticed how fine the garden is a-growing. There never was sich a digger as Mr. Alan before. Now, them winter beets, couldn't you tell he had been a-hoeing of 'em faithful?"

"Yes," answered Miss Cynthia with a shy smile that hid in the back of Blossom's neck, "they look like his artistic work."

"Well, you ain't so far wrong," answered Miss Selina Lue with an admiring glance at the soft blush behind Blossom's curls. "If a man have got it inside him to do one kind of work big, everything else in him have got to measure up to it; and with Mr. Alan it do, pictures and beets."

"You like his pictures as much as I do, Miss Selina Lue," said Miss Cynthia, her eyes shining with excitement at the bare mention of the treasures over in the barn.

"Child, them pictures jest feeds me. Looks like all my life I've been living on the plain every-day eating of things and he have handed me a plate of charlock-roots fer my spirit."

"I wish he could hear from the three he sent on to Chicago. They ought to be mounted and on the guild hall walls by this time." Miss Cynthia's voice was impatiently excited, for she knew how Mr. Alan longed for approval of his great commission, and for a very special reason, which she also knew.

"Miss Cynthia, honey, don't you git impatient about the letter, too. Don't never fergit that it is the man's part to champ the bit, but a woman must pull at life steady-like. There's the postman now; run, child, run!" And directly in the face of her wise counsels for serenity, Miss Selina Lue hurried after Miss Cynthia's flying figure.

"Oh," said Miss Cynthia as she stood with a letter clasped to her breast, "here it is, Miss Selina Lue, here it is! What do you suppose is in it?"

"Honey, I know what he is a-hoping fer, though not letting hisself expect it much. His father being one of the men to build the big hall, Mr. Alan have jest got his heart set on his seeing the pictures—and forgiving him fer painting 'em."

"Oh, I know, Miss Selina Lue, and I am so afraid—"

"You mustn't be afraid, honey child, but you must pray and have faith to soften his heart towards the boy. Jest hold to the thought of his forgiveness, and don't give it up, whether it's in that letter or not."

"Why, that sounds like we were sending 'thought waves' to him, Miss Selina Lue." And Miss Cynthia smiled even in her anxiety.

"Yes, I remember you told me about them 'waves' when I held to it that Mr. Kinney would come on back from town that time he got mad and tried to leave his family. Though you explained it fine to me, I didn't understand it at all and I jest kept on a-praying—old-fashioned prayers with no new-fangled fancy label on 'em. Lands alive, what's the trouble over at the Dobbses now!"

A shrill shriek rose from the interior of the Dobbs residence a few houses up the street, which was followed by a quick exclamation, at which Ethel Maud shot out of the front door, wriggled over the gate, and darted through a cloud of white dust to precipitate herself bodily into Miss Selina Lue's lap.

"They ain't a thing in the world the matter with her, Miss Selina Lue," called her mother from the front window. "She burned her fingers a-lifting hot ginger-cake from the pan while my back were turned. She muster thought she deserved a smack, fer she cut and run to you 'fore I made a motion at her."

"Ethel Maud," said Miss Selina Lue sternly. "go

right back and ask your mother can you have that piece of cake before you eat one mouthful. Then you can bring another piece for me and Miss Cynthia and one to divide with the babies. She always puts me and the babies' names in her cake-bowl," Miss Selina Lue added as Ethel Maud departed hurriedly to apologize. Soon Ethel Maud returned with three generous slices on a fluted china plate of amazing design.

"Miss Selina Lue, may I take part of mine over—to the river bank—he's sketching, and I promised—"

"Take the plate, child, and two pieces. Mis' Dobbs will admire to send it to him. One's more'n enough fer the babies and me. And, Miss Cynthia, don't never hold back from feeding men little attentions, even if they is dumb about showing as they likes 'em. Too many women treats husbands like hitching-posts. "Now," she said, "I must git to my—"

"Miss Selina Lue, come look what's coming up the hill! Come quick!" called Bennie Dobbs from down the street, his face shining with excitement.

"Lands alive!" said Miss Selina Lue as she went out to the middle of the street, "if it ain't a otter-mobile! From the way the poor thing's breathing looks like it might be going to staid. They hadn't oughter push the critter up that hill, it's too steep fer anything but a squirrel or a trolley-car to climb." As she spoke, the huge red machine gave a puff, pulled over the brow of the hill and stopped with a shudder at the very grocery door.

A beetle-browed, fierce, white-whiskered old gentleman sat in the tonneau and berated in a most astonishing way a very meek young chauffeur. "Now, you'll have to walk back to the garage and get one and leave me here to burn up in this unmitigated sun, you numskull—d'you hear?—numskull!"

The young man answered meekly, but not at all as if terrified, for there was something comic in the old gentleman's rage and there was a twinkle under the bushy eyebrows.

"Now, don't be bothered, mister," said Miss Selina Lue from the grocery steps, where she stood surrounded by all the small fry on the bluff. "The young man can go in on the next car and be back in no time with the monkey-wrench or whatever you need to fix it with. And you come right in and set here in the shade of the hackberry where you can git the river

—well, I just can't express myself about him; outrageous pig-head—d'you hear?—outrageous pig-head!"

"My, now, ain't that a pity!" said Miss Selina Lue sympathetically. "Did the poor boy take to drink?"

"Drink? No, madam, he did not! He's everything a gentleman ought to be, and more, the pig-head—d'you hear?—the pig-head!"

"Couldn't you do nothing with him?" asked Miss Selina Lue. "You have to make allowances fer young men-folks; looks like jest they youngness goes to they heads. Where did he break out?" Miss Selina Lue seated herself on the step beside his chair, and, as usual, her sympathetic and interested way had its effect of irresistibly inviting confidence.

"In a most unexpected—pig-headedness—left me and the business to go to the dogs and went trailing off after moonshine—d'you hear—moonshine!"

"Well, now, I expect he thought you could take mighty good keer of yourself and the business, too, you seem so strong fer any age at all," said Miss Selina Lue soothingly. The old gentleman drew himself up in his chair and looked quite rejuvenated by the mention of his obvious youthfulness.

"Oh, I could pull the business through well enough, but it was his leaving it for moonshine nonsense—d'you hear?—moonshine nonsense!"

"Well, things do happen strange in this world, and it looks like they can't nobody weigh out anybody else's cake fer 'em. Boys and fathers lots of times don't want to bite off the same slice of life." Miss Selina Lue's eyes had a far-away look in them and she spoke softly.

"But what's a man to do? Build a great business, and have a son come along and scorn it?"

"It might be that what a man thought was a great thing to do in life would look like small potatoes to his son. I certainly am sorrowful fer you about being so disappointed in your boy, and hurting as it is to me to talk about it, I want to tell you about how it was with Adoniram and Elder Millsaps, fer maybe it will help you to git comfort. You see, Elder spoke Adoniram out in meeting and asked fer prayers fer him 'cause he wouldn't take to the farm he had worked all his life to leave to him. Looked like a plow give Adoniram a pain, and farm chores set heavy on him all over. So Adoniram lit out and it was many a day 'fore they seen him again. I had



"My, my! . . . a very interesting family . . . and large—eh?"

breeze. Bennie, set out the big chair, and, Ethel Maud, you and Luella run to the well and draw a bucket of fresh water and hand some in that new gourd hanging by my door. Just come over here and be comfortable, mister."

Miss Selina Lue's bustling, hospitable enthusiasm had the gentleman out of the machine and seated by the grocery door before he knew it himself.

"Upon my word, madam, this is pleasant after the hot sun," he said in a booming voice, "very pleasant—d'you hear?—very pleasant!" and his brows drew up in an arch of amusement as Ethel Maud and Luella presented themselves before him with a dripping gourd held in two pairs of small hands.

"My, my, what a nice pair of little girls we have here! A very interesting family, all of them—d'you hear?—a very interesting family—and large—eh?"

"Lands alive, mister, this is all the children on the bluff; they don't none of 'em belong to me," said Miss Selina Lue, as she took the gourd from him and began to water the children, one at a time, according to size.

"Now, that's too bad, madam—d'you hear?—too bad. Such a fine lot! But, bless my soul, I think you are lucky not to own a single one! I—I've got the most outrageous pig-headed child myself and I

the little horsehair ring he made me and faith enough to hold him up anywhere. Lands alive, but it was funny when everybody went to the meeting-house to hear him speak when he come home! He had done studied and found out all about rocks and things and was in the government employ, and he had come home to tell all the neighbors that maybe they had a fortune in phosphate right under their potato-patches and orchards. And all of them was a-cheering of him and the squire a-calling him our leading citizen. I am mighty glad I've got that night at the meeting-house to look back on, fer he was blowed up by the first rock-crusher that was set going."

The old gentleman looked fiercer than ever, but the tips of his white mustache trembled and he drew his brows together as if in pain. "He's an ungrateful pig-head," he muttered, but a good part of the explosiveness was gone from his tone.

"Oh, maybe he ain't now," said Miss Selina Lue persuasively. "There's the case of Mr. Alan and his father—the poor old man's pretty nigh broke his son's heart and is acting fer all the world like you say your boy is, pig-headed. But we excuse him."

"Mr. Alan?" The old gentleman sat up, but Miss Selina Lue failed to notice the spark in his eyes.

[CONCLUDED ON PAGE 42]



# Indoor Games and Parties



## An Octo Party

THE merry plan of an Octo Party takes its name from the word "octo," meaning eight, all the games and arrangements of the occasion in some amusing way bringing in this number.

The invitations, if written ones are sent, might themselves embody the idea by various little puns on the number in question. Of these the following form will serve as an example:

DEAREST K8:—

I hope you can particip8 in an Octo Party next Thursday, the Eighth, at 8 minutes of eight o'clock. Do say you can come and don't, I supplic8, be 18.

Your affection8,

MOLLY.

Have on hand to reward those who arrive on the scene between eight minutes of eight and the hour itself a quantity of ginger-bread or sugar-cookies cut to represent figure eights of rather exaggerated sizes tied with ribbon. Each person really punctual receives one of these. These unexpected punctuality prizes will create great fun, and grown-up guests will be found to enjoy their sweeties with all the zest of the youngsters themselves.

Soon after 8 o'clock, by which time all the guests will have arrived, each guest receives a strip of cardboard and a sharpened lead-pencil with a request that he or she "draw the clock face with hands pointing to eight o'clock." Of course the clock, if there happens to be one in the room, must be covered over before the nature of this game is announced. But few of the guests will be really successful. This is owing to a catch—the fact that four o'clock on the dial is almost invariably (according to an old usage in clock-making) written by four ones, thus IIIL, instead of IV., which the fact that Roman notation is used for the rest of the hours would presuppose.

In another round, paper and pencils are distributed and each has eight minutes to write down as many as possible of the words terminating in "ate" that can be recalled at the moment. It will prove a most exciting mental scramble.

Again the fun is founded on a zigzag

puzzle formed in this simple way. Each person receives a piece of thin cardboard and a pair of scissors. With eight movements or slashes of the scissors he or she cuts the cardboard into pieces of any shape or size. When the bell rings each person passes the puzzle so formed to the person seated at his left and this person has eight minutes in which to work it back into regular shape.

Then a "reading lesson" of a very diverting kind where each player reads aloud a page from some book indicated by the entertainer, and, to avoid forfeits, must skip the eighth line, also the sixteenth, twenty-fourth, thirty-second and any other line which represents a multiple of eight occurring within the limit set—that is, one page. All words containing exactly eight letters must be skipped, also.

All those who are guilty of mistakes in the reading lesson must afterward perform amusing stunts prescribed by the forfeit master.

The prizes are pretty little cornucopias of tissue paper with big eights in gilt paper pasted on as decoration and each cornucopia containing eight big pieces of delicious home-made fudge.

## The Entertainment Ball

MAKE a huge ball of tape, or if this is not at hand, of strips of rags sewed together as if for rag carpet. Write the names of all those who will attend the party on slips of paper and wind them into the ball at random. The bigger the ball the funnier the game, so make it as huge as possible. When the game is to begin, the ball is slowly unwound until somebody's name drops out. This person then begins a story, inventing it as he unwinds the ball. When another name has been reached this second person must take up the narrative at the point where the first player left it and continues it until a third slip is dislodged. This continues until the end of the tape is reached, the last player finishing the story.



## A Winter Apple Sociable

A JOLLY plan for a winter-night's frolic is an apple sociable, for which a basket of greenings or of any of their rosy-cheeked relations will furnish all the fun.

No decoration of the rooms is essential to the success of the merrymaking, but where the hostess has time for it, the living-room can be made very pretty without going to trouble or expense.

Get a five-cent roll of crêpe paper in a pretty shade of apple green and cut into strips five inches in width. Fringe on both sides, leaving an inch-wide rib down the center, or if something quicker is wanted, shape it into "chains." If these strips are too short to stretch across the room diagonally, paste two or more together. Swing them across the ceiling from opposite corners and from the squares thus formed drop big rosy apples strung on red cords. The apples are easily strung by means of a bodkin.

As in the old rhyme, a (or the first number on the program) is an Apple-Pie. This is a pie-plate covered with a "sure nuf" crust which lifts away and discloses, instead of the conventional filling, a quantity of numbered slips of paper. Each slip has written upon it a question regarding the apple in history, legend, poetry, and so forth. The examples given below show that these are easy to work up from memory alone:

What apple caused a dreadful war? The apple awarded to Venus by Paris in his judgment.

What apple both jeopardized and saved a child's life? That of William Tell.

Where did the first apples grow? In the garden of Eden.

The slips are passed from hand to hand, and pencils and paper are distributed. Each tries to answer as many of the riddles as possible, and the player whose list of answers is afterward pronounced best wins a point toward the general prizes to be awarded at the end of the games. These prizes, by the way, are very mysterious in their nature. All

that can be found out about them is that the first prize is B. A. P., the second L. A. P. and the third N. A. P. If any guest overcome with curiosity tries to worm out further information the inquiries are skillfully evaded.

After the puzzle game have an apple race, where the winter fruit is pushed over a prescribed course with long sticks or umbrellas. The winners in these races receive each a point toward the prizes. Of course there will be a lively apple-paring bee, where each receives an apple and a knife, and must remove the peel in one unbroken curl. The person first to accomplish this feat wins three points, the second two points and the one coming in third one point.

For a contest on another, but equally funny, plan, each player receives an apple, out of which he must create some comical beastie or a human figure, using for limbs wooden toothpicks or wire hairpins, and for head, ears, etc., the prunes, peanuts, raisins and currants (a dish of which is provided for the purpose by the hostess). When all have completed their attempts, the different figures are placed on exhibition and the cleverest wins a point toward the prizes as before.

After this round the various points won can be counted up and the mysterious awards made. It will create great merriment when B. A. P. is found to mean a Big Apple-Pie, L. A. P. a Little Apple-Pie and N. A. P. No Apple-Pie. The refreshments consist of apple pie or tarts with cocoa, coffee or milk.

## Nonsense Art

WHEN a really hilarious drawing contest is wanted, make as many slips of paper as there are guests and on each slip write some nonsense subject as a goop, a bird's-eye view, a disembodied spirit, a figment of the brain, a purple cow, a blood-curdling yell, an optical illusion, etc. Fold the papers, pass them around in a basket and let each draw one. Have a number on each slip. This number indicates the order in which each man or girl shall proceed to the blackboard and illustrate the subject he or she has drawn to the delectation of the company.

# Good Poems for Your Scrap-Book

## Opportunity

BY JOHN J. INGALLS

Master of human destinies am I,  
Fame, love and fortune on my foot-  
steps wait;

Cities and fields I walk, I penetrate  
Deserts and seas remote, and, passing by  
Hovel and mart and palace, soon or  
late,

I knock unbidden once at every gate.  
If sleeping, wake; if feasting, rise before  
I turn away. It is the hour of fate.

And they who follow me reach every  
state

Mortals desire, and conquer every foe  
Save death. But those who doubt or  
hesitate,

Condemned to failure, penury or woe,  
Seek me in vain and uselessly implore—  
I answer not and I return no more.

## The Reply

BY WALTER MALONE

They do me wrong who say I come no  
more

When once I knock and fail to find  
you in,  
For every day I stand outside your door  
And bid you wake and rise to fight  
and win.

Wail not for precious chances passed  
away,

Weep not for golden ages on the wane:  
Each night I burn the records of the day,  
At sunrise every soul is born again.

Laugh like a boy at splendors that have  
sped,

To vanished joys be blind and deaf  
and dumb.

My judgments seal the dead past with  
the dead,

But never bind a moment yet to come.

Though deep in mire, wring not your  
hands and weep,

I lend my arm to all who say, "I can."  
No shamefaced outcast ever sank so  
deep

But yet might rise and be again a man.

Dost thou behold thy lost youth all  
aghaſt,

Dost reel from righteous retribution's  
blow?

Then turn from blotted archives of the past  
And find the future pages white as  
snow.

Art thou a mourner? Rouse thee from  
thy spell.

Art thou a sinner? Sins may be for-  
given.

Each morning gives thee wings to flee  
from hell,

Each night a star to guide thy feet to  
heaven.

## The Cry of the Dreamer

BY JOHN BOYLE O'REILLY

I am tired of planning and toiling  
In the crowded hives of men;  
Heart-weary of building and spoiling,  
And spoiling and building again.  
And I long for the dear old river,  
Where I dreamed my youth away;  
For a dreamer lives forever,  
And a toiler dies in a day.

I am sick of the showy seeming,  
Of a life that is half a lie;  
Of the faces lined with scheming  
In the throng that hurries by  
From the sleepless thoughts' endeavor  
I would go where the children play;  
For a dreamer lives forever,  
And a thinker dies in a day.

I can feel no pride, but pity  
For the burdens the rich endure;  
There is nothing sweet in the city  
But the patient lives of the poor.  
Oh, the little hands too skilful  
And the child-mind choked with weeds,  
The daughter's heart grown wilful  
And the father's heart that bleeds!

No, no! from the street's rude bustle,  
From trophies of mart and stage,  
I would fly to the wood's low rustle  
And the meadow's kindly page.  
Let me dream as of old by the river,  
And be loved for the dreamer's sake;  
For a dreamer lives forever,  
And a toiler dies in a day.

## Auf Wiedersehen!

BY JAMES RUSSELL LOWELL

The little gate was reached at last,  
Half hid in lilacs down the lane;  
She pushed it wide, and, as she passed,  
A wistful look she backward cast  
And said, "Auf Wiedersehen!"

With hand on latch, a vision white  
Lingered reluctant, and again  
Half doubting if she did aright,  
Soft as the dews that fell that night,  
She said, "Auf Wiedersehen!"

The lamp's clear gleam flits up the stair;  
I linger in delicious pain;  
Ah, in that chamber, whose rich air  
To breathe in thought I scarcely dare,  
Thinks she, "Auf Wiedersehen!"

'Tis thirteen years: once more I press  
The turf that silence the lane;  
I hear the rustle of her dress,  
I smell the lilacs, and—ah, yes,  
I hear, "Auf Wiedersehen!"

Sweet piece of bashful maiden art!  
The English words had seemed too fain,  
But these—they drew us heart to heart,  
Yet held us tenderly apart;  
She said, "Auf Wiedersehen!"

## We Have Been Friends Together

CAROLINE ELIZABETH SARAH NORTON

We have been friends together  
In sunshine and in shade,  
Since first beneath the chestnut-tree  
In infancy we played.  
But coldness dwells within thy heart,  
A cloud is on thy brow;  
We have been friends together,  
Shall a light word part us now?

We have been gay together;  
We have laughed at little jests;  
For the fount of hope was gushing  
Warm and joyous in our breasts.  
But laughter now hath fled thy lip,  
And sullen glooms thy brow;  
We have been gay together,  
Shall a light word part us now?

We have been sad together.  
We have wept with bitter tears  
O'er the grass-grown graves where slum-  
bered

The hopes of early years.  
The voices which were silent then  
Would bid thee clear thy brow;  
We have been sad together,  
Shall a light word part us now?

## Pansies

BY SARAH DOUDNEY

I send thee pansies while the year is  
young,

Yellow as sunshine, purple as night;  
Flowers of remembrance, ever fondly  
sung

By all the chiefest of the Sons of Light,  
And if in recollection lives regret

For wasted days and dreams that were  
not true,

I tell thee that the "pansy freaked with  
jet"

Is still the heart's-ease that the poets  
knew.

Take all the sweetness of a gift un-  
sought,

And for the pansies send me back a  
thought.

## Two Pictures

BY ANNIE D. GREEN (MARIAN DOUGLAS)

An old farm-house with meadows wide,  
And sweet with clover on each side;

A bright-eyed boy who looks from out  
The door with woodbine wreathed  
about,

And wishes his one thought all day:  
"O, if I could but fly away

From this dull spot, the world to see,  
How happy, happy, happy,  
How happy I should be!"

Amid the city's constant din,  
A man who 'round the world has been,

Who, 'mid the tumult and the throng,  
Is thinking, thinking all day long:

"O, could I only tread once more  
The field-path to the farm-house door,

The old green meadow could I see,  
How happy, happy, happy,  
How happy I should be!"



# A Substitute for Ruth

## A Two-Part Story by Elliott Flower

Illustrated by H. Haggarth Leonard



### Chapter I.

MOLLY had a good heart. Her judgment might be faulty, but her heart was right. Also, Molly had as much romance in her soul as could well be crowded into the soul of a ten-year-old girl. Molly had served faithfully as letter-carrier for Ruth and Bertram, so she knew something of the circumstances. Ruth and Bertram were to be married, but, for some reason, papa objected. That was why Molly had been called upon to act as letter-carrier. Ruth was watched closely, but Molly could come and go as she chose. If Ruth strolled away down the road, in search of wild flowers, papa was immediately suspicious, for papa had once accidentally discovered that one of the excursions for flowers had ended in a meeting with Bertram, and it had at once occurred to him that there probably had been other meetings. So, after that, he decreed that Ruth should not search for wild flowers or anything else that would take her out of sight of the house, unless accompanied by some other member of the family.

One thing that papa had not discovered, however, was that there was a little tin box concealed under a fallen tree and that this tin box frequently held a note from Ruth or for Ruth. Papa, with all his wisdom, did not know as much about that box as Molly did, for Molly had put letters in it and taken letters out. Molly had also met Bertram at the fallen tree, and it was Molly's opinion that Bertram was "just the nicest man that ever lived." She could not understand why papa did not like him. Bertram said she was the dearest little girl in the world. Bertram gave her a kiss for Ruth and another for herself. Bertram occasionally left candy for her with the note for Ruth. Bertram once told her, laughingly, that it was a good thing for Ruth that he had not met Molly first. Could any man be nicer than that?

Circumstances had compelled Ruth and Bertram to confide in Molly, and Molly was true to her trust—and Bertram. She was also true to Ruth, as a matter of necessity in being true to Bertram, but her allegiance was really to Bertram. She was ready to make any sacrifice for him, even to letting him marry Ruth. She could not understand why Ruth was particularly necessary to his happiness, but she had a dim idea that the greatest disappointment that a man can have is to find himself without a wife just when he expects to have one. And Bertram was doomed to disappointment.

Ruth was now locked in her room, and Molly, sitting on the fallen tree, held in her hand a note that said Bertram would meet her (Ruth) at the depot in Chicago, to which city he would precede her, as previously planned, to make arrangements for an immediate marriage. Here, at last, the elopement was all arranged, and Ruth was a prisoner. It would be a dreadful disappointment for Bertram; very likely the shock would be more than he could bear.

Molly sighed dismally and read the note again.

It must not be inferred that Molly was in the habit of reading these missives. On the contrary, she had previously known only so much of the details of the courtship as she had surmised from observation and the explanations that the interested parties had deemed it necessary to make. But, owing to Ruth's incarceration, this note could not be delivered, and Molly had thought the circumstances justified her in reading and answering it herself, in order that Bertram might be made acquainted with the situation. Bertram, however, was already on the way to Chicago.

"It's going to be awful for him," mused Molly. "She knows she isn't going to be married, but he doesn't. It's a terrible thing not to have a wife when you expect to have one."

Then Molly fell to wondering how she could break the force of this blow. Bertram could not have Ruth; that was certain; but it did not follow that he could not have a wife. Ruth was not the only girl in the world, or even the only girl for him. A man in search of a wife may have a preference—he may not want to take any that is offered—but Bertram had said it was a good thing for Ruth that he had not met Molly first. Ruth being now unavailable as a bride, was it not Molly's pleasurable duty to go to the rescue of the unfortunate man? "Think of the poor man!" is a feminine rule that Molly had learned early.

"I'll go myself," she murmured thoughtfully. "I'm sorry for Ruth, but I know she wouldn't want him disappointed, and he loves me as much as he does her. He's just the same as said so."

Molly had learned from the note the train upon which he would be expecting Ruth. It was a train that left the following morning. There was no night train, but Bertram and Ruth had devised a plan that they thought would enable Ruth to get away without exciting suspicion when the time came—a plan that the action of her father in unexpectedly locking her up had frustrated. The time had come and Ruth did not even know it.

A morning train, however, was just the thing for

Molly. No one paid much attention to what Molly did in vacation time, and she would be in Chicago before she was missed. Her courage might not have been equal to a night escape from the house and a two-mile walk to town in the dark, but courage was not required to make that trip by daylight, and it would be an easy matter for her to slip away immediately after breakfast.

No one would then be curious as to her whereabouts until noon.

Molly was naturally much excited. There is excitement for the average girl in the most prosaic home wedding, and Molly was running away to be married. Is it any wonder that the adventure thrilled her delightfully? But, her father and mother being absorbed in the consideration of what should be done with Ruth, she managed to get through the day without attracting undue attention to herself, and then, alone in her room at night, she broke open her little iron box. She found in it three dollars and forty-six cents, which was more than was necessary for her car-fare. So far it was all right, but it occurred to her that there was need of other things.

"I haven't any trow-soo," she reflected, "and a girl ought to have a trow-soo when she's married. But," she added, her face brightening at the thought, "Ruth didn't have any trow-soo, either, and she couldn't have taken one with her, anyhow. Perhaps you don't have to have trow-soos when you elope. I can't even take the clothes I've got."

This disturbed her a little, for there were two or three dresses that she hated to leave behind, but presently she recovered her spirits again.

"When you're married," she told herself, "your husband has to buy your clothes, and I'll tell him to get me a lot of new dresses right away. I don't

but mama won't let him. Mama likes you better than papa does."

It took no great ingenuity to construct the whole story from these facts. Mr. Conover had discovered that Ruth had been corresponding with him clandestinely, and he had demanded of her some promise that she had refused to give. Then he had shut her up, so that he might have time to devise some plan to make his will effective. Mrs. Conover's course was equally clear. She was rather favorably disposed toward Bertram, although not prepared to go directly counter to her husband's wishes, and would naturally interpose objections to any radical action. The question was, how much did Mr. Conover know and what would he do?

"Your papa didn't know Ruth was coming here to-day, did he?" asked Bertram.

"No," answered Molly, "and neither did Ruth. I got the note, and Ruth was locked up, so I came."

"That was very good of you," commended Bertram doubtfully. "I know you meant well, but—"

"You don't seem very glad to see me," pouted Molly.

"Indeed, I am glad to see you," declared Bertram, "but running away like that will stir up an awful row."

"Wouldn't it have stirred up a row if Ruth had come?" demanded Molly.

"Why, yes, I suppose it would," admitted Bertram, "but Ruth and I were going to be married."

"Well," said Molly, "Ruth couldn't come to be married, so I did."

"Did what?"

"Came to be married." It seemed to Molly that he was very dense and not nearly so much of a lover as he had been when he met her as Ruth's messenger at the fallen tree where the letters were hidden.

"You came to be married?" he repeated slowly, still unable to comprehend. "To me?"

"Of course," said Molly. "Ruth couldn't come, and I knew you wouldn't want to be disappointed."

In spite of his bewilderment and anxiety, Bertram could not repress a whimsical smile. He spoke seriously, however. "But that's quite impossible, Molly," he said.

"Don't you like me?" demanded Molly.

"I like you very much," he assured her. "You're the dearest little girl I know."

"And didn't you say it was lucky for Ruth that you didn't see me first?"

"Yes," he admitted. The astonishing situation was becoming a severe tax on his wits. "Yes, I did say that," he went on, "but I didn't see you first, you know, Molly."

"I don't see what difference that makes, when Ruth isn't here and I am."

"It makes a big difference," he maintained. "I guess you don't want to be married very bad," said Molly spitefully.

"Indeed I do, Molly," he returned.

"Well," asserted Molly, "you're acting mighty funny about it. It's your wedding-day, and I've come all the way here to keep you from being disappointed, and you ain't even glad to see me. I don't care what you say I guess you don't like me at all."

A quick transition from indignation to grief brought tears to Molly's eyes and Bertram's perplexity increased.

He kissed her and spoke soothingly.

"That's better," she said, wiping away the tears. "Why didn't you kiss me at first?"

"I was too surprised to think of it," he explained. Then, still holding her close to him, he tried to make the situation clear to her without hurting her feelings. "I'd dearly love to marry you, Molly," he said, "if I were

only younger, but I am too old for you?"

"I don't think so," said Molly.

"It seems all right now," he conceded, "but it wouldn't later. You see, I'd be getting older and older while you were growing up, so I'd be a middle-aged man when you were still a young lady."

"That's so," agreed Molly. "Why, it would be silly, wouldn't it?" she exclaimed. "I'd be only a mother when you were a grandfather."

"Something like that," said Bertram soberly.

"But," sighed Molly, "it's awful hard to give up the clothes."

"What clothes?" asked Bertram.

"Why, a girl's husband has to buy her clothes, don't he?" returned Molly.

"Oh, that's it, is it?" laughed Bertram. "You were going to marry me for clothes."

"No, no," protested Molly. "But it would be jolly to have somebody buy clothes who wouldn't grumble about it. Papas always grumble, I guess."

"Molly," said Bertram, "we'll go right out and buy a nice new gown, and then you can start back."

"Lovely!" cried Molly, "but I mustn't go back to-day."

"Why not?"

"Because," explained Molly, "I'll be punished if I go back to-day, but by to-morrow they'll be so glad to get me back that they'll just hug and kiss me."

"Molly," he said, "now that we know that it would never do for us to be married, you're willing to help Ruth and me, aren't you?"

"Yes, indeed! I'll do everything I can."

"That's good," he commended. "I'll find a place where you will be safe and comfortable to-night, and you needn't go back until to-morrow or the next day. Meanwhile, we'll take a little walk that may help a bit."

"Where to?" asked Molly.

"To a newspaper office," answered Bertram, "and perhaps we'll stop at a candy-store on the way."

"This," said Molly, "is as good as being married."

[CONCLUDED IN NEXT ISSUE]



"... a meeting with Bertram"

blame girls for wanting to be married. It's going to be awfully nice to have what I want all the time."

With this cheering thought in mind she went to sleep, and the next morning, having dressed herself with unusual care and made sure that her money was safely tucked away in her pocket, she slipped out of the house immediately after breakfast and started for the train.

### Chapter II.

A MAN who is expecting his sweetheart, having made all necessary preparations for a quick and quiet wedding, may be pardoned for showing some surprise when his sweetheart's little sister arrives in her place.

Bertram Winfield, known to his intimates as Bert, was too startled to make even an effort to conceal his surprise and anxiety. Molly was a very nice little girl, but he saw in her presence only an indication that something was wrong.

"Where's Ruth?" he asked.

"Locked up," answered Molly.

"And she sent you to tell me?" he queried, still puzzled.

"No," replied Molly, "she don't know anything about it. I just came myself."

"Came yourself?" he repeated. "Why?"

"Well," said Molly demurely, "it seemed a shame to disappoint you."

Bertram's bewilderment was increasing, but the depot platform was no place for explanations, so he took her to a deserted corner of the ladies' waiting-room.

"Now tell me all about it," he urged.

"Why, there isn't much to tell," explained Molly. "I don't know it all, anyway. Papa found one of your letters, and then he had just a dreadful time with Ruth. He wanted her to promise something, but she wouldn't. Then he was awful angry, and she cried, and he locked her in her room. She's been there two days. I think he wants to send her away somewhere,



Your Last Chance to Obtain Farm and Fireside's Famous Annual Offers of

# Rose Bushes

and Other Great Flower Collections

## The Five Best Roses

(Collection No. 101)

Every one a strong, healthy bush which will bloom the season of 1910. All are different. All are famous varieties as follows: Climbing Meteor, the brightest colored of all roses and a persistent bloomer; Mr. Ben R. Cant, deep red and one of the hardest and most varieties; Mlle. Franzisca Kruger, deep yellow—unique and distinct from all others; White Maman Cochet, snow white, tinged with the faintest suggestion of blush; Etolde de Lyon, one of the hardest and most beautiful yellow tea roses. See offers below and opposite.

## Five Fragrant Carnations

(Collection No. 103)

Every plant in this collection is a beauty. They will be shipped to you carefully packed, all ready for setting out. Here is a list of the plants: Prosperity, the largest Carnation ever offered; Rose Pink Enchantress, one of the most famous varieties; Red Sport, the showiest variety of Carnation ever grown; color a flaming scarlet; the brightest dazzling crimson—the largest and best of its color; Lady Bonifant, pure white, sweetly scented with old-fashioned clove fragrance. See offers below and opposite.

We Guarantee That These Flowers Will Bloom This Season of 1910

## Our Best Offer

Offer No. 1

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50c

Any One Collection of Flowers

The price of FARM AND FIRESIDE alone if you send us with your order the names and addresses of five friends who you wish to receive a copy of this FARM AND FIRESIDE and our flower offers. If you want more than one collection add 15 cents for each additional collection wanted.

This Offer Good for 30 Days Only!



Carnation No. 103

## Another Big Offer

Offer No. 2

Get two people each to accept Offer No. 1, opposite. Get each to give you 50 cents for one flower collection and one full year's subscription to Farm and Fireside, and get from each also the names and addresses of five people who ought to be interested in our flower offers. Send us the money (\$1.00) and the ten names and addresses, and we will send each of the two subscribers Farm and Fireside for a year, and any one flower collection. In addition, we will send you, as a reward for your kindness, one flower collection without cost.

One of the two subscriptions may be your own, in which case you will receive two flower collections.

Special Offer! With every subscription sent to Farm and Fireside in connection with any offer on this page, we will furnish without cost a large copy of Balfour Ker's beautiful painting, "Her Mother's Voice," if you ask for it.

## Six Magnificent Chrysanthemums

(Collection No. 102)

This collection consists of six large-flowering Japanese varieties, all different colors, the very finest and largest chrysanthemums obtainable, as follows: Black Hawk, dark velvety crimson; Estelle, pure white; Millicent Richardson, beautiful rosy violet; Mrs. Robert Foerderer, soft creamy yellow with light amber shadings; Percy Plumridge, very large Japanese incurved variety of buttercup-yellow; W. F. McNeice, lavender pearl. See offers above and opposite.

## Cultural Directions

Collections must be ordered entire. Accompanying each lot of plants are full directions for planting, care, etc. Please state what month you prefer to have your plants sent to you.



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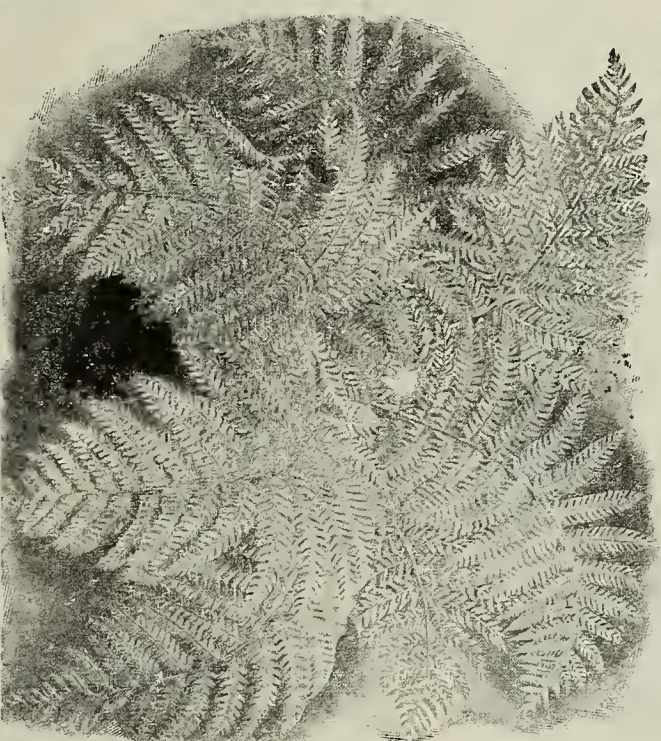
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Springfield, Ohio

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**Our Offer** We will send you this wonderful fountain-pen by return mail if you will send us only four eight-month subscriptions to Farm and Fireside at 25 cents each. Tell your friends that this is a special bargain offer. You can easily get them in a few minutes. Send the subscriptions to

**FARM AND FIRESIDE, SPRINGFIELD, OHIO**

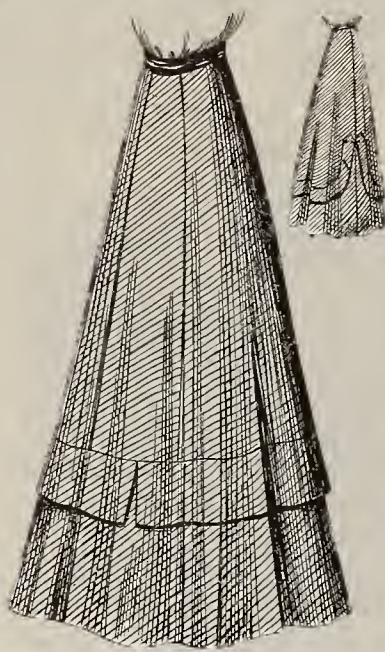


## Madison Square Patterns



No. 1475—Apron With Princess Panel

Pattern cut for 6, 8 and 10 year sizes. Quantity of material required for medium size, or 8 years, two and seven eighths yards of twenty-four-inch material, or one and seven eighths yards of thirty-six-inch material



No. 1386—Three-Piece Skirt With Novel Trimming Band

Pattern cut for 26, 28 and 30 inch waist measures. Length of skirt all around, 41 inches. Quantity of material required for medium size, or 26 inch waist, five and one fourth yards of thirty-six-inch material, or four yards of fifty-four-inch material

SPRING and warm days will soon be here, and with the warmer weather will come the necessity of "house-cleaning" our wardrobes. Some dresses will only need a little touch to make them quite fresh again, but often there will be the necessity of a new gown.

Some of the following suggestions may be helpful in finding the little touch that makes a last year's gown fresh and stylish. A waist may have become soiled or worn around the collar; if that is the case, cut the neck out and make a tucked yoke and collar of fine lawn or net. This will make it seem almost like a new waist. Then perhaps the sleeves are large and full. In that case it would be so easy to invest in a pattern and cut them over into the present style of smaller sleeves, for there is nothing that makes a gown so up-to-date or so old-fashioned as its sleeves.

There are many things, such as a new belt, a little fresh lace, or an up-to-date jabot, which tend to make a waist bright and fresh again. When it is necessary to have a new gown at this time of the year, it is advisable to get a dress which will be serviceable now and yet in its style will be appropriate for spring and summer. Poplins, light-weight cloths or cashmeres will be good materials for spring, while linen suiting or any of the new attractive ginghams will be all right for summer for such costumes.

For the style of the gown, could there be two more attractive models than those shown on this page? Although quite the vogue this past winter, one-piece dresses are still stylish.

### Madison Square Patterns

FOR every design illustrated on this page, we will furnish a pattern for ten cents. Our big catalogue of Madison Square patterns will be found invaluable to the woman who makes her own clothes. We will send it to you if you inclose with your order ten cents in postage. Here is our latest liberal offer in regard to Madison Square patterns. This offer holds good up to April first. We will give one Madison Square pattern for only two yearly subscriptions to FARM AND FIRESIDE at regular price of thirty-five cents each. Your own subscription may be one of the two. We will send FARM AND FIRESIDE one year, new or renewal, and any one pattern for only forty cents. Send orders for patterns and for the pattern catalogue to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.



No. 1268

No. 1371—Princesse With Plaited Flounce  
Pattern cut for 34, 36, 38 and 40 inch bust measures

NO MATTER how many dressing-sacques a woman may have, one more is always acceptable, if it is simple and dainty in style. Such a dressing-sacque, one that any woman will need, is illustrated on this page in pattern No. 1268. Challis and outing flannel are both good materials to use for this sacque, which has a smart tailored look given it by the stitched box-plaits and the collar.

No. 1268—Plaited Dressing-Sacque With Stole Collar

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four and one half yards of twenty-seven-inch material, or three and one half yards of thirty-six-inch material



No. 1454

No. 1455

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NOTHING along the princesse line could be prettier for the young woman than the model illustrated in No. 1371. The long panel running from the yoke down past the waistline to the knees will give almost every woman a graceful line. With only the velvet bow, plain machine stitching and buttons for trimming, this dress is very inexpensive, and worn with a white yoke of lace or net will be appropriate for the dressiest of occasions.

Another pretty model is No. 1454 and 1455. Although this is a two-piece dress, the costume effect can be obtained by joining the skirt and the waist to the belt, which is made of the same fabric. It is simple but stylish and is a good model for making over a last year's dress. With a tucked chemisette and cuffs of net or silk in the same color as the material of the dress and a band of velvet for finishing the collar and sleeves, this would make a very pretty dress for many occasions. This would also be a good model for a wash fabric.

No. 1454—Tucked Waist With Chemisette

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and one fourth yards of thirty-six-inch material, or one and three fourths yards of forty-four-inch material, with five eighths of a yard of tucking

No. 1455—Nine-Gored Skirt Buttoned in Front

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Length of skirt all around, 41 inches. Quantity of material required for medium size, or 26 inch waist, four and three fourths yards of thirty-six-inch material, or three and three fourths yards of forty-four-inch material





# Dressmaking Lesson



**T**HE one-piece princess dress keeps right on being fashionable. There is something very convenient about this style of dress, and the average woman likes it. This dressmaking lesson tells in detail just how to make the princess gown here illustrated. The pattern, No. 1463, lends itself to a variety of different developments. It can be made up extremely plain and of some inexpensive material and be used exclusively as a house dress for every-day wear. Or, on the other hand, if material such as silk warp cashmere or broadcloth is selected and the front and back panel of the gown elaborately braided, the dress is quite smart enough to be used as one's very best gown for church or for calling.

The pattern for this particularly attractive princess is cut in five sizes, for 34, 36, 38, 40 and 42 inch bust measures. Its price is but ten cents and the pattern may be ordered from the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

The envelope for pattern No. 1463, Princess With Plaited Skirt, contains eight pieces which are lettered as follows: The front V, the side front W, the side back Y, the back T, the skirt E, the collar L, the upper sleeve K and the under sleeve F. These letters are perforated through each piece of the pattern in order to identify it. This method of lettering is particularly useful to the amateur dressmaker who is not familiar with the appearance of the different parts of a dress when they are placed flat. If you use the Madison Square patterns, it is impossible to become confused and mistake one part for another, because the pieces are always lettered.

Before placing the pattern pieces on the material, smooth them out carefully, removing all the wrinkles from the tissue. In cutting, lay the edges of the front, the back and the collar marked by triple crosses (XXX) on a lengthwise fold of the material. Place the side front and side back, the skirt and the two sleeve portions with the line of large round perforations in each lengthwise of the goods. Mark all the perforations and be sure to cut out all the notches before removing the pattern pieces from the material. As the square perforations which indicate the waistline are especially useful when putting a princess together, be careful to have them indicated on your material.

## To Make the Princess

First join the side fronts and side backs at the under-arm seams. Pin the pieces together, matching the notches first. Then match the upper edges, bring the waistlines together, pinning securely at this point, and finally match the lower edges. After the pieces have been pinned at these points, put several pins in between before attempting to baste. When you do baste, follow the lines of small round perforations which are one inch in from the edges.

The next step in making this princess is to form the plaits in the skirt portion. Do this by bringing the corresponding lines of triangle perforations together. Pin securely first, then baste along these lines from upper to lower edge.

Now lay the skirt out on the table, pin each plait down smoothly and then baste flat about one fourth of an inch in from the edge of each plait. The plaits in the skirt portion turn backward and should be pressed before anything further is done to the dress. Of course you will need to press them again or maybe twice more, but this first pressing must be done before the skirt is joined to the lower edge of the side front and side back according to notches.

After the skirt has been joined to the side fronts and side back, these portions of the dress are very heavy and should rest on a table while you are joining the other parts of the dress to them. Otherwise the weight of the material in the skirt will pull the upper part out of shape and spoil all the pretty, graceful lines.

Join the back of the princess to the side backs and back edges of the skirt portions according to notches. Follow the instructions given for joining the under-arm seams, matching the notches, the waistline and upper and lower edges before pinning the entire seam.

Turn in the side edges of the front panel three eighths of an inch and baste along the edges, being very careful not to stretch them, as the side edges of the panel are bias. Arrange the right

side of the front panel on the right side front and skirt by bringing the edge of the front to the line of small round perforations on the right side front and skirt portion. Pin first at the waistline. Then at the upper and lower edges. Then pin closely between these points before basting. Stitch about one fourth of an inch in from the right edge of the front, from shoulder to lower edge.

Arrange the left side of the front panel on the left side front and skirt



No. 1463—Princess With Plaited Skirt

Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 38 inch bust, six and one half yards of thirty-six-inch material, or five and one half yards of forty-four-inch material.

This pattern costs ten cents and can be ordered from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City

portion in a similar manner, starting from a point twelve inches below the waistline and stitching securely from that point to the lower edge. Have the stitching one fourth of an inch in from the left edge of the panel.

The dress fastens invisibly from the shoulder to the point where the stitching starts (twelve inches below the waistline, which is indicated by square perforations). Face the edge of the panel with a narrow bias facing of silk and sew the hooks on this side, also on the shoulder. Have eyes or loops on the left side front along the shoulder line and down the line of small round perforations. Be sure that the hooks and eyes are quite close together and match each other perfectly, for this closing should be invisible, and much depends upon the way in which the hooks and eyes are sewed on the dress.

Join the collar to the neck as notched. Turn hems on the collar by notches and fasten at the back. Bind the neck edge of the back from the left shoulder seam to the center back.

Join the upper and under sleeve according to notches. Ease the upper sleeve at the elbow between notches. If the material is soft, it is not a difficult task to ease this fullness evenly. With wiry fabrics it is necessary to gather the fullness in the upper sleeve at the elbow and draw up the gathers to fit the space, distributing the fullness and pinning closely before basting.

Face the lower edge of the sleeve with a bias facing and stitch it around the top to simulate a cuff. Gather the sleeve at the upper edge between double crosses. When arranging the sleeve in the arms-eye always hold the sleeve toward you.

Bring the front seam in the sleeve to the notch in the front of the princess and place the notch in the top of the sleeve at the shoulder seam. Pin first at these two points, then pin the plain part of the sleeve smoothly in the arms-eye. Draw up the gathers to fit the remaining space, distribute evenly and pin carefully before attempting to baste in the sleeve.

There is no hem on this princess. If you wish to finish it with a hem, you will have to add to the lower edge of the dress, when you are cutting it out, the three or four inches you desire for a hem and turn it up in the regular way.

It is much easier, however, to face the lower edge of a dress in which some portions are arranged in plaits. The facing should be bias and from three to four inches deep.

There are two ways of facing a skirt. One way, the facing is put in and stitched at the top to look like a hem, while the other way, the facing is invisible.

When a stitched facing is used, turn up the lower edge of the princess the desired length and baste as near the extreme lower edge as possible. Three fourths of an inch should be allowed on the inside and the remainder of the material cut away. Press the edge flat and then catch stitch around the bottom to hold the turned edge in place. The lower edge of the facing should be finely hemmed by hand, but the upper edge is machine stitched.

When an invisible facing is desired, the work is done in an entirely different manner. For this kind of a facing, the lower edge of the princess is cut off just three eighths of an inch longer than the length you desire, a seam's width. The facing is then stitched to the lower edge of the princess with the right sides of princess and facing together. Now place the dress flat on a table, turn up the lower edge and baste. Pin the upper edge of the facing to position, using plenty of pins, and be sure to have it perfectly smooth before basting. Then baste with a very fine stitch, hem it up by hand and press flat.

Miss Gould will be glad to answer any questions pertaining to home dressmaking which may perplex the readers of Farm and Fireside. She will send by return mail a personal letter to the writer if a stamped and self-addressed envelope is inclosed. Direct all letters to Miss Gould's Dressmaking Department, care of Farm and Fireside, 11 East 24th Street, New York City

## Useful Novelties

**T**HE woman who makes her own clothes has many of her perplexities solved for her by the innumerable little sewing helps which can be bought in the shops.

For instance, every woman who has ever tried knows all about the difficulties that have confronted her when she has attempted the making of a tailored coat. It has not been the outside of the coat that has seemed so impossible, oh, no indeed, but the inside—the padding and the stiffening to make it fit as it should. Generally speaking, the coat made by the amateur dressmaker is a pretty hopeless-looking garment from the style point of view when it is finished. And invariably the reason is that she has not understood how to shape the coat correctly to her figure by the padding.

Now for just this difficulty and to overcome it perfectly the shops are selling sets of canvas coat-fronts to be used as an interlining and placed between the material and the lining of the coat. These canvas fronts are shaped so that they bring the stiffening in the coat just where it should be, and they are also padded, the padding carefully stitched in around the arms-eye and over the bust. If properly adjusted, they give a tailored air to a coat, taking away entirely the home-made look. These ready-to-adjust interlinings sell for nineteen cents a pair.

Another difficulty in the making of a tailored coat is to have it look smart at the shoulders. Just how to manipulate the canvas padding here so that the material will not have a slinky look, but stand out in mannish effect, is ordinarily no easy matter. The shops, however, are now selling shoulder-forms to take the place of the padding. These are stiffened and shaped just as they should be, and, in making the coat, are slipped in between the lining and the material. Used in connection with the canvas fronts, they give to the home-made coat the professional tailored touch.

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## SHE QUIT

### But It Was a Hard Pull

It is hard to believe that coffee will put a person in such a condition as it did an Ohio woman. She tells her own story:

"I did not believe coffee caused my trouble, and frequently said I liked it so well I would not, and could not quit drinking it, but I was a miserable sufferer from heart trouble and nervous prostration for four years.

"I was scarcely able to be around, had no energy and did not care for anything. Was emaciated and had a constant pain around my heart until I thought I could not endure it. For months I never went to bed expecting to get up in the morning. I felt as though I was liable to die any time.

"Frequently I had nervous chills and the least excitement would drive sleep away, and any little noise would upset me terribly. I was gradually getting worse until finally one time it came over me and I asked myself what's the use of being sick all the time and buying medicine so that I could indulge myself in coffee?

"So I thought I would see if I could quit drinking coffee and got some Postum to help me quit. I made it strictly according to directions and I want to tell you, that change was the greatest step in my life. It was easy to quit coffee because I had the Postum which I now like better than the old coffee.

"One by one the old troubles left, until now I am in splendid health, nerves steady, heart all right and the pain all gone. Never have any more nervous chills, don't take any medicine, can do all my housework and have done a great deal beside."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



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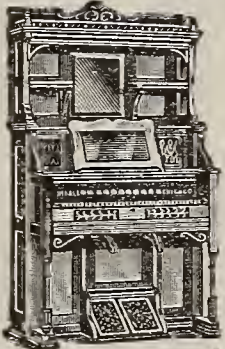
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**YOUNG FOLKS' DEPARTMENT**

CONDUCTED BY COUSIN SALLY



**"Tim O'Taggerty—Hero"**

By Eunice Janes Gooden



ONE week's trial had been sufficient to convince Messrs. Jenks and Boggs, energetic proprietors of the "Royal Nonesuch," that they had not gone amiss in having chosen lower Third Street as the location for their "Picture Palace." Indeed, its fame seemed already to have spread over the whole ninth ward. There was not a "newsy" about Sunshine Alley who had not attended at least one performance. Little wonder, then, that Tim O'Taggerty, son of Bridget Mary O'Taggerty, ("wash-woman" living on the third floor of the Tanner Tenements), should have heard all about it.

Oh, to be able to go inside! But Tim had noticed that the people were all expected to pay some money to that man cooped up in the funny box near the door. Therein lay the whole difficulty—money! Where did they all get it, he wondered. He knew that "mither" got hers by washing at the "grand lady's" house, and that "Buster's" pennies came from selling newspapers. But this attractive avenue to wealth was as yet closed to Tim, for the whole world combined to pronounce him still too little to join the newsboy band. Therefore, there was nothing to be done but wait until he grew big, and waiting was indeed the hardest of all things required of small boys such as Tim!

One afternoon the man in the "funny box," being none other than Mr. Jerry Boggs, junior partner of the "Royal Nonesuch" company, noticed that Tim was accompanied by a round-faced, sandy-haired mite of humanity, whom her escort addressed as "Totts." The two made a picture that appealed to even the matter-of-fact Jerry Boggs. He watched them interestedly as they stood a little apart from the crowd listening to the snatches of "In My Merry Oldsmobile" that could be heard whenever the door opened to admit the groups of expectant people.

"Perty muthic! Tim-Tim, perty muthic!" Totts exclaimed, pointing a chubby finger at the door.

"Yes, ain't it perty!" was the brother's comment. "There's awful lovely things in there, pictur-people what runs aroun' an' eats loike real folks an' jumps out er the winder whin the house's afoire, an' pictur-dogs what kin swim in the water, an' pictur-babies what kin clap their hands."

"Me want ter see!" Totts cried, and she tugged at the hand that held hers.

"No, ye kin't go in there, Totts," he urged. "Listen, ye kin hear the perty music if ye will stand still!"

"Me go in!" she declared emphatically.

"But ye kin't I say; not ter-day. Sometime, mebbe, Tim kin take ye inside." Then he added quickly, as if to divert her, "Oh, lookie Totts, the big sprinkle-wagon over there; let's go foller it, an'—"

"Here the sentence died on Tim's lips, as Jerry Boggs called from the window of his "box," "Say, little one, do you like the music?"

"Eth, me yike perty muthic," Totts replied, her round eyes smiling up at him.

"All right, my little lady, you just march right in; and see here," he added to the astonished Tim, "I guess you won't object to seeing a picture or two yourself, will you?"

"Al," he called across to the door-keeper, "you just seat those two, will you? Put them where they can see the canvas without breaking their necks."

"Tim-Tim!" shrieked Totts as from a quivering patch of light on the opposite wall, she saw a huge automobile dashing directly toward her. "Tschu-tschu comin', Tim-Tim!" and she crouched behind her brother, who thrust forward an arm to shield her.

When the two were finally seated, Tim, with an arm thrown comfortably about Totts, explained.

"Tain't nothin' but a pictur all the toime! Ain't it funny, the tschu-tschu runnin' away an' gettin' all a-busted up?"

"An' gettin' all a-buthed up," echoed Totts.

From the exciting automobile disaster the scene changed to that of a burning house. Tim followed the example of his neighbors and clapped his hands vigorously, as a noble dog—more clever than the firemen themselves—rescued a helpless baby from the flames. The metallic tones of a piano now announced the motif of the next picture, "The Dying Soldier." From somewhere behind the curtain the song, "Just break the news to mother," was rendered.

The pictures illustrating the pathetic song were, first a series of stirring battle scenes and, lastly, the picture of a dying soldier. The sight of his gory wounds drew a horrified shudder from the audience. Tim felt Totts' hand grow cold in his.

"There, don't ye cry," he said. "Tain't nothin' but a pictur-man, Totts, don't ye look at him."

The next number not only drove away the tears from weeping eyes, but kept the audience fairly screaming from start to finish.

The laughter came to an abrupt stop, however.

The moving-picture apparatus seemed to have broken suddenly, and the people found themselves in utter darkness.

"Turn on a light!" some one screamed.

"Can't do it, lights don't work," came another shout.

Some one sprang to the door to open it, but it blew shut with a bang. A hoarse voice demanded, "Here, manager, turn on your lights, will you?"

"Can't do it, wires don't work!"

All was panic and pandemonium in a second's time.

"Sit down people! Sit down!" Mr. Jenks, the operator of the picture-machine commanded. But his words were not even heard by a crazed people who made a stampede toward the narrow door, the only exit. Jerry Boggs stood upon one of the seats, hissing for silence. "Every man, woman and child stay where you are, you're safer here than on the street! Get back there!" he cried, beating back the frantic people who were fighting and trampling each other in their craze to get nearer the door.

Tim encircled poor Totts, to keep the crazed mob from crushing her. But he himself was squeezed and elbowed. What did it all mean, he asked himself. How dared they trample upon Totts so cruelly? And she such a little, little girl! He raised her in his arms and pressed her to him. Something must be done! And the something came to him like a flash. Leaning forward, he literally butted his way through their midst. He pushed toward the stage. That seemed to be the one uncrowded spot. Feeling his way up the three steps to the stage, he deposited his bundle and at last drew a free breath. Totts was weak from crying, and Tim, for the first time, became conscious of the bruises on his arms and head.

"There, Tottsie, don't ye cry. Tim-Tim's here," he said comfortingly. She sank to the floor, and his own little legs, usually so sturdy, seemed almost too weak to hold him. Sitting down on the stage, he took her in his lap. "D'ye want Tim-Tim ter sing ye perty song, Tottsie?" he asked. If there was one thing on earth that could quiet and comfort Totts, it was one of the "perty" songs that Tim had learned during the one happy month when he had attended the Third Street mission kindergarten.

"What song does ye want?" he asked. He trembled, for little Totts lay limp in his arms. "Ting bwight a' bootiful," she lisped as she buried her head on his shoulder. Tim waited a moment to get his breath, then he sang softly:

"D'ye want Tim-Tim ter sing ye perty song, Tottsie?" he asked

"All things bwight an' bootiful,  
All creatures great an' small,  
All things wise an' wondifull,  
Our Father made 'em all."

"Ting more," Totts demanded, as he stopped. "Ting more, Tim-Tim." So he went on:

"Each liddle flower that opens,  
Each liddle bird that sings,  
He made 'em shinin' colors,  
He made 'em tiny wings."

"Hark!" some one called out. "What's that?"

All was hushed and still, as he repeated the last refrain. The screams had died away. It was not the same kind of emotion that had moved the crowd first to laughter and then to tears, as they had witnessed the moving-pictures a short time before. It was something quieting and calming that brought tears to their eyes now, something that seemed to restore them to sanity and banish their fear.

Tim, whose one thought was of Totts, was unconscious of the fact that others were receiving the same comforting that he was giving her. When he at length looked from the sleeping form in his arms, he became conscious of a sea of faces, all turned in his direction.

Tim O'Taggerty has never been able to recall what happened after that. He does not know that "mither's precious-box" on the shelf contains a certain newspaper clipping. Bridget Mary O'Taggerty reads it every night, the while shedding many a fond tear. Some day he will read it for himself, and he will recognize the story, for it is a true one. It bears the title, "TIM O'TAGGERTY—HERO!"

[For Cousin Sally's Letter See Page 42]



# Easter Post-Cards

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# Money-Making for Women

## Poultry and Eggs

By Sarah T. Lyon

UNTIL recent years, it has been believed that women as money-makers were restricted to the needle or other similar work. But so marked has been woman's success in other fields that it is quite evident that she can succeed in any line where hard manual labor is not required. This being the case, it is not surprising that women have largely entered the field of poultry-growing and that their success has been all that could be desired in this line.

Few pursuits are more fascinating and lucrative to a woman than that of raising chickens, and the fact that on the farm this branch is left entirely to her care is an evidence of her adaptability to this work.

It would take many pages of this journal to give even a partial list of the women who have made a success of raising chickens, not simply from the standpoint of pin-money, but even on a large scale, for a handsome living. Miss Frances E. Wheeler, of Chazy, New York, combines bee-keeping with poultry-raising, and a visit to her place will demonstrate how completely a woman can master this work; while Mrs. A. Basley, of Prospect Park, California, combines ducks as a profitable part of poultry culture.

Nor does it require a great deal of capital with which to secure a successful start, as many women have started with nothing more than a broody hen and a setting of eggs and built up a business, the income of which will annually run into hundreds of dollars.

The main thing is attention to details, such as cleanliness of quarters, proper housing and selection of a laying strain of fowl.

Some women may shrink from the thought of killing a chicken for market, and to such we would say that it is not necessary that she should do so, for she can make a specialty of egg production, and when it becomes necessary to sell broilers, or old hens for roasters, they can be sold alive or a man hired to do the killing and picking. But this minor consideration will scarcely, if ever, confront her, for she will soon find that the production of eggs will be the most profitable part of the venture, and here she will naturally concentrate her efforts.

Taking results simply from the standpoint of shipping to market, this field offers large inducements, and where an energetic woman can secure the patronage of two or three first-class city hotels, the prices that can be realized are simply enormous.

The writer knows of a poultry venture within a mile of where these words are now being written, which at the present time, with snow on the ground, is shipping thirty dozen eggs every other day and getting fifty cents a dozen for each and every dozen. Of course this price is large, owing to scarcity of eggs and due to the fact that they are sold to two or three fashionable hotels, but taking it year in and year out, the energetic woman will be able to secure on an average of thirty cents a dozen for all the eggs she can produce.

An egg is seventy-four per cent water and about fourteen per cent albumen, the rest being made up of fat, ash and lime. The reason hens lay most of their eggs during the spring, summer and fall, is because they are getting plenty of albuminous food in the form of insects, grasshoppers and worms, and all the grass they can eat, and water they can drink. In addition to all this they are getting plenty of exercise and are comfortably warm. When winter comes on, the cold and snow kill all the insect life and grass, and often the water is frozen, and being thus deprived of the egg constituents and being fed in most cases nothing but corn, the hens refuse to lay, and it is all attributed to the cold weather.

With dry cut clover, which can be boiled in winter, to take the place of grass, and with ground meat-meal, which is a perfect substitute for insects, and by seeing that the water-tanks are always filled with fresh water, any woman can, by giving her fowls comfortable quarters, make them lay in winter when eggs are at their highest price.

It is attention to these little things that has enabled many women to make a magnificent income.

The buildings need not be elaborate and expensive, but can be made of tongue-and-grooved boards with a covering of tar-paper on the outside to shed the rain and conserve the heat. The main thing is to have them dry, with just enough glass in each section for light, and kept free from lice, and have the windows facing south.

The best time of the year to start in chicken-raising is in the spring, and under no conditions should one start with other than thoroughbreds, for, while the first cost of thoroughbreds may be a little more than common fowls, the advantages so far outweigh this that any woman would make a mistake to start with mongrels. One of the nice things about thoroughbred fowls is that in the young

chicks we may know what to expect as to size, color, etc., as each breed has its characteristics and reproduces them in their offspring, while from mongrel stock no two chicks will be alike.

Then again, where thoroughbreds are kept, a woman can secure fancy prices for her eggs for setting, even as high as two dollars for a setting of thirteen, whereas mongrel eggs never bring any more than the market price of eggs. This is a point to be considered.

When once the foundation stock of thoroughbreds

tion, but are small in body, which is used as an argument against them when it comes to killing and dressing them. On the other hand, the Brahmas, the Cochins and the Langshans, or Asiatic class, are enormous in size, but poor as layers.

In order to combine size and egg-producing qualities in the same fowl many experiments in cross-breeding have been tried, until we have the Plymouth Rocks and Wyandottes, or fowl of the general-purpose class, that lay well in addition to being of a good size for eating. The difference in fowls of the same class is simply in plumage, such as White Wyandottes, Buff Wyandottes, etc., the general characteristics of each class being the same.

Now if the main object is producing eggs, by all means keep the Leghorns, the single-comb white being preferable, as it is a trifle larger than the others of the same class and lays a larger egg, the shell being as white as snow.

If the purpose is to raise both eggs and fowls for eating, then keep the Plymouth Rocks or the Wyandottes, the white being preferable. The eggs of this breed are brown. If big roasting fowl only are desired, then select such a breed as the Brahmas or Cochins.

The writer has experimented with many breeds, and becoming satisfied that the egg production was the most profitable branch of the business, gave up all breeds in favor of the single-comb White Leghorns, though, for a fowl strictly for eating, the White Wyandottes are par excellent.

Another conclusion the writer came to, as the years of experimentation passed by, was that artificial incubation was in every respect superior to the natural method, but when it comes to the question of what make of incubator to buy, this is the rock on which many a venture has been wrecked. After trying several different machines, I became convinced that many of the incubators on the market are made to sell and not to hatch. And only after much trial and expense did I at last come upon a machine that does its work properly.

Out of ninety-five fertile eggs put into it we had no difficulty in hatching out seventy-five chicks, as lively and healthy as could be and free from lice, which would not have been the case had an old hen hatched them out.

The incubator was self-regulating, requiring about five minutes' attention night and morning, and there was no worry as to whether the old hen was off the eggs too long or was trampling the chicks to death or flying at our face as we went to take them out.

Then the use of an incubator makes it possible for us to set the eggs and hatch chicks as early in spring as we desire without having to wait for broody hens, and this is a big argument in favor of the incubator, for it is the early-hatched chick that makes the early fall layer, and the early fall layer means with proper care the entire winter layer.

The little chicks were placed in a brooder when two days old, and were fed dry cracked grains from the beginning, for no greater mistake can be made than to feed a wet, sloppy mess to little chicks, and yet this is the most universal way that people feed them.

The dry grains, eleven different kinds cracked and mixed, are thrown into a litter of cut clover, and the chicks get splendid exercise scratching for it, and the dry grain makes the gizzard do the work, its walls thereby becoming firm, which would not be the case were wet and soggy food fed to them. The little chicks should have free range, and water and meat-meal always near them, and when about six weeks old can be taken from the brooders and put into colony houses until the first of November, when they should be put into their laying houses for the winter.

By feeding dry grains scattered in the litter of the laying houses, and a supply of beef-scrap and grit and water by them, in comfortable quarters, there is no reason why the eggs should not come with great regularity, even during a blizzard.

As to the market for the product, every locality will demand its own method, but any intelligent woman can, with a little pluck and attention to details, secure a magnificent income from this profitable and congenial field without the close indoor confinement required by other things, and the absence of heavy manual labor adapts it to those whose health is frail. The writer has had no trouble in securing eggs all

through the severe cold winter weather when they were bringing their highest price and when the neighbors were getting absolutely none. To those readers who are contemplating entering the poultry-business, I cannot impress upon you too strongly the importance of securing thoroughbreds for your start. Even though the price for them is a trifle high, they will more than make up for this extra outlay.



A Group of Thoroughbreds Scratching for Their Dinner



Interior of a Two-Pen Poultry-House—a Shelter for Chickens on Stormy Days



Plenty of Eggs in Winter—a Proof That It Pays to Start Poultry-Raising With Thoroughbreds

is secured, which is in a very few months, then it costs no more to secure their eggs and set them and raise the chicks than common fowl.

What breed shall the poultrywoman keep, is a very important question, for upon this point the success or failure of the enterprise will turn. Let me say at the beginning that breeds of fowl are as pronounced in their racial traits as are races of people. For instance, the Leghorns, Minorcas and others of the Mediterranean class excel all others in egg produc-



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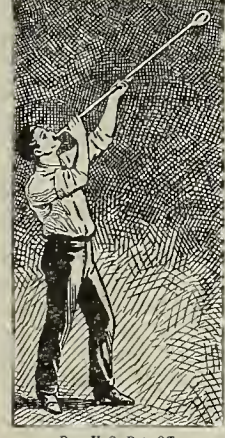
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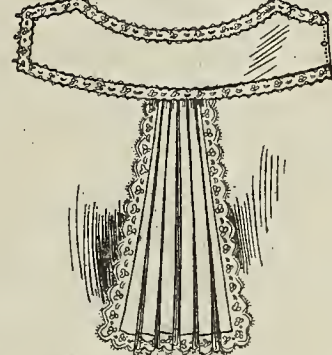
# Our Girls at Home

## A Mystery Album

I WANT to tell the girl readers of FARM AND FIRESIDE about an unusual little album that I saw a few days ago, because it was such a novel idea. I am sure that you are all just as tired as I am of the albums that we have seen since the days when we were children. But this album is something quite new and different, as, of course, a mystery album should be. The purpose of this album is to contain messages, sentiments and thoughts from one's friends, which are to be opened on the date that is written on the outside of the message.

To make the album, take a blank-book having a heavy paper cover—a regular composition-book will do very nicely. Cut the corners off the cover diagonally from the back to the middle of the front edge, both top and bottom. Then fold the corners of each leaf toward the front cover so that they will just meet in the middle of the page and be slightly smaller than the cover. The book will now be triangular in shape and much thicker than before. The cover for the album may be velvet, pretty silk or dainty cretonne in one's favorite color, or burnt leather would be most serviceable. If desired, a fastening of baby ribbon may be used on the front edge of the cover. In a tiny envelope put a lot of gummed labels and at the top of the album attach the envelope by a red ribbon, in much the same manner as you would a book-mark.

The mystery album is now ready for use. When any of your friends call, ask them to write a verse, message or good wish of some kind on one of the unfolded pages. The leaf should then be sealed, and a date written on the label to show when the seal may be broken and the message read.



Collar and Jabot Made From a Discarded Lace Waist

## New Grab-Bag for Fairs

THE old-fashioned grab-bag at fairs is being replaced by a novel feature which is not at all difficult to get up, and is infinitely more "catchy" to patrons. It is called "The Old Lady With One Hundred Pockets," and can be easily arranged in this way:

On a good plump barrel with as big a waist measure as can be secured nail a small keg, such as salt goods sometimes come in, to form the lower and upper portions of the body. The head may be a stiff pin-cushion, covered with white muslin and painted rag-baby fashion with eyes, nose and mouth, tacked firmly to the top of the keg. Make a dress of calico or any very cheap material, having the skirt very full to suggest an old-time crinoline. The skirt is made with a number of pockets, some large, others medium-sized or small. Adjust a shawl around the old lady's shoulders, finish her with corkscrew curls, either false hair or raveled hemp rope, big ten-cent spectacles and a sun-bonnet or old lady's cap with strings, preferably the latter. Into each pocket some inexpensive article on the type of the usual grab-bag prize is slipped and a card with a number is then pinned on the outside of each little sack. The patron chooses a pocket by number and on paying ten cents or whatever the price agreed upon may be receives the gift it contains.

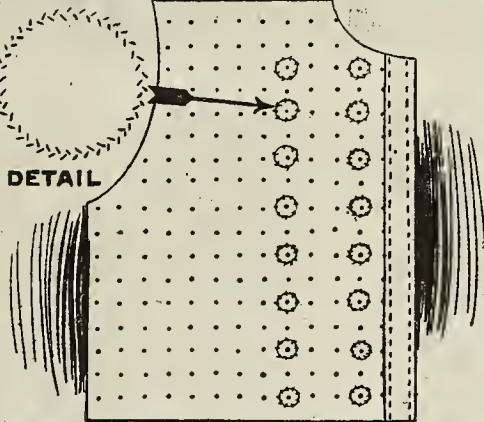


Fig. 1—Showing How a Polka-Dot Waist May be Worked in Feather-Stitch

in the design shown in Fig. 3. Draw the design on tissue paper, baste carefully to the material where desired and stitch through paper and material. Any suitable braiding pattern can be used in this way.

And now about the jabot. The one illustrated was made from a discarded lace waist. The collar was cut out of lawn and the insertion ripped from the waist was basted on to make a border of lace. For the jabot cut the lawn any length and width desired, edge with the lace from the waist. Plait and attach it to the middle of the collar at the lower edge.

All the jabot will cost is twenty cents for the lawn and you will have one that could not be purchased for less than one dollar and fifty cents.

## Smart Dressing

IT'S a very easy matter to dress well when one has plenty of money and time to spend on clothes, but it is the girl who dresses well on very little that deserves the most credit.

If only girls would realize that it is the little touches in dress that make or mar a costume. The first two essentials of smart dressing are good taste and attention to little details. By "details" I mean dress accessories—collars, neck-bows, belts, cuffs, ruching. A well-dressed girl that I happen to know never wears a neck-bow that does not harmonize with the color of her waist and skirt; her collars and cuffs are always immaculately clean and white, and she never wears soiled ruching. Oh! there are many, many things that this clever girl knows, but it will take too long to tell them all here. However, I will give you one of her big secrets. It is this: She always tries to introduce originality and individuality in her clothes, and in her own clever way she makes her plain tailored waists look almost as attractive as the embroidered ones in the shops. Let me tell you about three dainty waists that she showed me. They were tailored waists and each one had a little hand-work on it. She confided that the most artistic designs are those based upon the fabric or weave of the material used.

Fig. 1 shows the decoration of a waist made of polka-dot white cotton poplin. Certain of the dots were selected, rings drawn around them with a lead-pencil, a spool being used as a guide (carefully centered), and the ring worked with rather heavy cotton in feather-stitch. She said soft cotton should not be used, for it would be lost when the waist had been ironed; heavy spool cotton is the best. Also work the belt, collar and cuffs, but first plan all very carefully. Her waist was white worked in pale pink cotton, and you have no idea how charming it was.

The next waist, the design of which is shown in Fig. 2, was perhaps the prettiest of the three. The yoke effect was worked out in serpentine braid of suitable size, the centers of the daisies being a few French knots made in heavy cotton. The material was all-white madras with a heavier cord through it making a plaid.

The other waist was made of very beautiful blue linen, of fine, closely-woven quality, and was simply machine stitched with rather heavy white thread

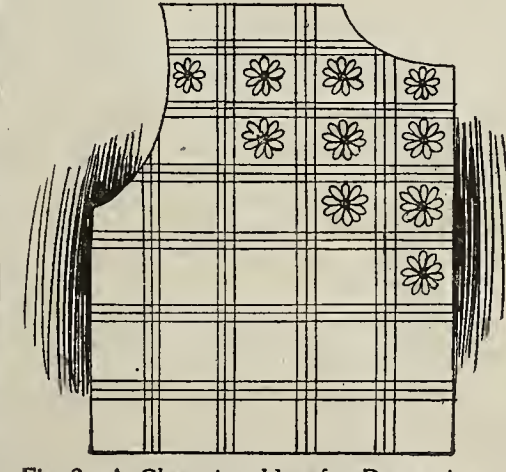


Fig. 2—A Charming Idea for Decorating a Waist of Cross-Bar Material

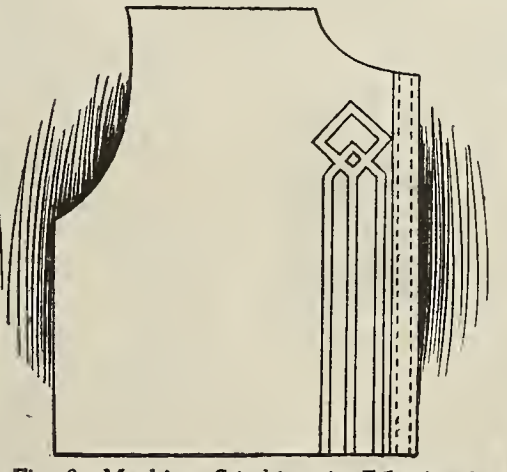


Fig. 3—Machine Stitching is Effective in Trimming a Waist of Plain Material

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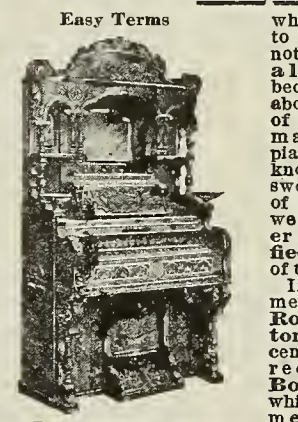
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# The Household Department



## Easily-Prepared Breakfast Dishes



shows how they can be quickly and easily prepared.

**SOUR-MILK GRIDDLE-CAKES**—Mix and sift two and one half cupfuls of pastry-flour, one half teaspoonful of salt and one and one fourth teaspoonfuls of soda. Add two cupfuls of sour milk and one egg well beaten. Drop by spoonfuls on a hot greased griddle and cook on one side. When puffed full of bubbles and cooked on the edges, turn and cook the other side. Serve very hot with butter and maple syrup or butter and sugar.

**BACON AND ONIONS**—Peel as many small onions as desired, drop them into salted boiling water and gently stew until tender, then put them in a buttered baking-dish and spread a layer of sliced bacon on top and sprinkle with paprika. Stand in hot oven until the bacon is cooked and the onions nicely browned.

**EGG-MUFFINS**—The following recipe makes thirty muffins, so if not more than half that number is required, use one half the proportions given and a small egg. Mix and sift three and one half cupfuls of pastry-flour, six teaspoonfuls of baking powder, three tablespoonfuls of sugar and one teaspoonful of salt. Add gradually one and one third cupfuls of milk, one egg well beaten and three tablespoonfuls of melted butter. Bake in buttered gem pans twenty-five minutes.

**CORN-MEAL CRISPS**—Pour slowly one cupful of boiling water onto seven eighths of a cupful of granulated yellow corn meal. Stir until perfectly smooth, and add two and one half tablespoonfuls of melted butter and one half teaspoonful of salt. Spread as thinly and uniformly as possible (using a long broad-bladed knife) on a generously buttered inverted dripping pan. Bake in a moderate oven until well browned, and cut at once into three-inch squares. It is absolutely necessary that the water used in the preparation of these crisps should be poured from a tea-kettle of boiling water.

**MINCED BEEF ON TOAST**—Take the meat from between the bones of a ribbed roast or any little bits that would not be serviceable in other dishes, chop them fine, and to each pint allow one tablespoonful of butter, one of flour and a half pint of tomatoes for stock. Mix the butter and flour together, then add the tomatoes strained or stock; when boiling add meat and a palatable seasoning of salt and pepper. Stand the mixture over hot water until smoking hot and serve on squares of toasted bread.

**EGGS POACHED IN MILK**—This is a very nourishing and easily-prepared dish. Make as many slices of toast as there are eggs to be cooked. Rub the bottom of a frying-pan with butter, then pour in enough milk to give an inch depth. Let the milk come to a boil, drop in two eggs at a time, being careful when breaking them not to pierce the yolks, and cook until the whites of the eggs are solid, then remove with a skimmer and place on the buttered toast. Poach as many eggs as desired in this way, then thicken the remaining milk and pour over the eggs and serve.

**SAUSAGE-SOUFFLÉ**—A delicious breakfast dish may be made from left-overs: A cupful of mashed potatoes, four sausages, one egg, a few slices of cooked bacon, bread or cracker crumbs, butter and seasoning. Beat the potatoes well, mixing in the batter and add finely-chopped sausages. Beat the egg well and add, stirring the whole vigorously. Season. If the mixture is too firm add a little cream or milk. Sprinkle with bread-crumbs, brush lightly with butter and place in hot oven. When thoroughly browned, serve with sliced bacon.

**BUNS**—The following is a fine old-fashioned recipe: Add two and one half tablespoonfuls of sugar and one half teaspoonful of salt to one cupful of scalded milk; when lukewarm add one yeast-cake dissolved in one fourth of a cupful of lukewarm water, and one and one half cupfuls of flour. Cover and let rise until light; then add one third of a cupful of butter, three tablespoonfuls of sugar, one half cupful of raisins stoned and cut in quarters and enough flour to make a dough. Cover and let rise, shape like biscuits, let rise again and bake in a hot oven. If preferred glazed, brush over with beaten egg before baking. If these directions are carefully and accurately followed the result will be more than satisfactory.



## Hints for Thrifty Housewives

Never throw away the little scraps of cheese that seem almost useless. These tiny bits may be grated and saved in a bottle for immediate service on macaroni or potatoes. The grated cheese may also be spread on crackers and placed in the oven to melt, making a dainty bite for Sunday-evening tea.

Soiled sponges may be quickly cleansed and freshened by rubbing the juice of a lemon well into them and then rinsing several times. Using first hot and then cold water. A thorough washing in ammonia every few weeks and frequent sun baths are also good for sponges that are in constant use.

Do not throw away the tops of old shoes. These pieces of leather make excellent interlining for iron-holders. Make the holders oval in shape, and have both cover and lining the same size. It is well to stitch them firmly around the edges by machine. This holds the pieces together.

When the edges of stiff collars and cuffs begin to fray do not discard them immediately. Try rubbing these rough edges with a piece of wax candle and then wipe them off with a clean handkerchief. It greatly prolongs the life of stiffened linen.

Unframed photographs are often marred by spots from greasy and soiled fingers. These spots may be removed by covering them with fine talcum-powder which should be applied with a soft rag, rub gently and then blow the powder off. This cleans the picture and does not harm the paper in the least.

If the cream gives out at an inopportune moment a substitute may be made by beating together the white of one egg and a teaspoonful of sugar in a little water. It should be put in the cups before pouring the coffee.

A source of annoyance to most mothers is the tape on their boys' blouses insisting upon slipping outside. One mother suggests running in the hem a tape long enough, when pulled up tight, to be passed around the waist and then be fastened in front with a button and button-hole on the tape.

All green vegetables should be salted while cooking; those that grow underground should not be salted until after they are cooked. Both kinds should be put over the fire in boiling water, instead of cold.

Where carpets are still in use, the weekly sweeping is a much more arduous undertaking than where there are only rugs to be cleaned. To get the best results from a broom, before using it the first time, put the straw part in a pail of boiling water and let it remain there until the water becomes cold. Then put the broom, after shaking all the water out of it possible, out in the open air and sunshine and let it become quite dry. When ready to use dip it quickly in and out of water again, and sweep the carpets thoroughly in the usual way. The damp broom will take up the dust much better, and yet not be sufficiently damp to make the carpets wet. Once a week dip the broom for a minute or two in clean boiling suds, then put it outside to dry. If the carpets look at all dusty or dingy after sweeping, wipe them thoroughly and carefully with a mixture made with two tablespoonfuls of ox-gall and four tablespoonfuls of lukewarm water. Dip a clean cloth in the mixture and wring it until almost dry. Then go over the carpet with it. This will brighten it wonderfully.

**THE CORNER CUPBOARD**—Having a very small kitchen with no room for cupboard or kitchen cabinet, the only thing to do was to make the most of the little wall space we had by putting up a useful bracket shelf of convenient height over the table, and a corner cupboard. We regarded the cupboard as a last resort, scarcely worth putting up, but now we think it one of the best things any kitchen can have.

The man of the house was the carpenter and the cupboard is not beautiful to look upon, but it does very well, and the doors keep the flies out better than the curtained shelves I have seen. The shelves are quite close together, as no large articles are kept on them, and it is possible to have practically all the supplies needed right within reach. Bottles are pushed into the narrow corners, baking-powder boxes fit into small spaces, and everything is compact and handy. A small jar of sugar, a jar of prepared flour, quart cans filled with vinegar, lard, molasses, raisins, salt, coffee, tea and other daily-used food supplies are right at hand, as well as things not so common, the latter being kept in the back, and the others in front. Of course the things in boxes from the grocery can be used right from the cartons and need no marking, but for other things cracked fruit-jars and empty tin coffee-cans are employed.

Last, but not least, on the top shelves out of reach and out of mind—that is, out of the mind of every one but the housewife—are the things so necessary at times and so inconvenient at others. It is worth a great deal to be able to mount an old chair and produce the rosin or the beeswax or the tallow without the frantic search that many housekeepers have before they lay their hands on them.

HILDA RICHMOND.

## Unusually Good Cakes and Puddings

**CRISP MOLASSES- COOKIES**—Of course there is nothing new about molasses-cookies, but who does not love the old-fashioned kind that grandmother used to make? This is such an exceptionally fine recipe that we feel sure you will be glad to try it and see for yourself what delicious cookies can be made from it. Heat one half cupful of molasses to the boiling-point, and add one and one half tablespoonfuls of butter, one and one half tablespoonfuls of lard, one fourth of a cupful of sugar and one tablespoonful of milk. Mix and sift two cupfuls of flour, one half teaspoonful of soda, one half teaspoonful of salt, one half teaspoonful of clove, one half teaspoonful of cinnamon and one half teaspoonful of nutmeg. Add to first mixture, and chill thoroughly. Toss one fourth of the mixture on a floured board, and roll as thinly as possible, shape with a cookie-cutter first dipped in flour, place near together on a buttered sheet, and bake in a moderate oven.

**FRUIT-ROLLS**—Two cupfuls of flour, two teaspoonfuls of baking-powder, one half teaspoonful of salt, two tablespoonfuls of melted butter, two thirds of a cupful of milk, one third of a cupful of seeded raisins chopped fine, two tablespoonfuls of citron chopped fine, two tablespoonfuls of sugar and one third of a teaspoonful of cinnamon. Mix together, then roll to one fourth of an inch in thickness. Brush over with melted butter, sprinkle with the fruit, sugar and cinnamon, and roll up like a jelly-roll. Cut into pieces about three quarters of an inch in thickness and bake in a quick oven for five minutes. These fruit-rolls are nice to serve at a light luncheon or supper.

**LEMON SPONGE-CAKE**—Separate four eggs, beat the yolks and whites very light, add one third of the whites to the yolks and stir. Then add two cupfuls of sugar and beat light, the juice of one lemon, two teaspoonfuls of yeast-powder in two cupfuls of sifted flour, stir in alternately with the remainder of the whites. Lastly add one half cupful of hot water. Bake in a shallow or square pan for thirty-five minutes in a quick, steady oven.

**SPANISH CREAM**—One and one half pints of milk, one half box of gelatin, five tablespoonfuls of white sugar, three eggs, two teaspoonfuls of vanilla. Soak the gelatin in the cold milk for one hour, put on to boil and when boiling add the yolks of the eggs well beaten with the sugar and flavoring. Let boil three minutes, then take from the fire, stir in the well-beaten whites of eggs. Pour into molds. Serve with or without cream.

**SCALLOPED APPLE-PUDDING**—Cut one small stale baker's loaf in halves, remove all soft part, and crumb by rubbing through a colander. Melt one fourth of a cupful of butter and add to bread-crumbs, stirring lightly with a fork. Cover bottom of buttered pudding-dish with buttered crumbs and add two cupfuls of sliced apples. Sprinkle with one eighth of a cupful of sugar mixed with one eighth of a teaspoonful of grated nutmeg, three fourths of a tablespoonful of juice and a few gratings from the rinds of a lemon. Repeat, cover with remaining crumbs and bake forty minutes in a moderate oven. Cover at first to prevent crumbs from browning too quickly. Served with sugar and cream this is delicious.

**ORANGE-CAKE**—Two cupfuls of sugar, one cupful of butter, four eggs, three cupfuls of flour, two heaping teaspoonfuls of baking-powder and one cupful of milk. Separate the eggs, keeping two whites for the cake and two for the icing. Cream the butter and sugar together, then add the beaten yolks. Pour in milk, add the flour and baking-powder (which has been sifted) the juice of one orange and a little grated orange-rind. Lastly, add the beaten whites of the eggs. Bake in three layers.

**Icing**—A heaping cupful of granulated sugar, four tablespoonfuls of water, boiled until it spins a thread. Add this gradually to the beaten whites and beat until it stiffens. Then add half a teaspoonful of the grated orange-rind. Spread icing on the layers and cover with the oranges cut in small bits. Three oranges will make one cake. If orange filling is not desired—use a plain boiled icing and thicken with one cupful of chopped nut-meats for each layer. Frost the top in the usual manner. Flavor the cake to taste.





# To Enrich Garden Soil

By Samuel Armstrong Hamilton

WHILE there have been many rapid improvements in other directions, the garden world has not been standing still. On the other hand, it has in the past few years been advancing with such rapidity that there is difficulty to keep pace with it. The agricultural colleges and experimental stations have been devoting themselves more than usual to the problems of the garden, with the result that the art of garden-making has been fairly revolutionized.

There was a time when it was supposed that any one could make a garden who could dig it and plant the seeds, or induce some one else to do so, but that time is of the past. To-day it is a science, and art, if you will, and requires scientific attention and skill.

The greatest advance has been in the mastery of the soil. We have learned by experiments conducted, to the last analysis; first, that there is no mystery about it and, second, that it is made up, or should be, of certain ingredients to produce certain results. We have learned that the soil is just what we make it. When virgin soil comes into our possession we analyze it, and if it does not suit our purpose we change it. The old-time practice was to try it, and if it was not to our liking we sold the place and tried another. That was in the day when we supposed that we had to be content with the soil as we found it, but now it does not matter what its composition may be when we get it, we can make it over to suit our needs. The mystery fled from the soil the day it was discovered that all soil action was due to the bacteria it contained; if there were no bacteria there was no fertile soil. We supposed that the friable nature of the soil was due to the action of the elements—the wind, water and frosts. These help in a large way, but we also now know that it would take untold ages for these elements to do what the soil bacteria accomplished in years.

This indicates the course we must pursue in order to fit our garden soils for their purpose. In the average garden we grow certain crops of certain flowers. All of these require soils which are friable, light and porous. If these features are absent we put them there by mixing with the soil a humus which will produce the bacteria necessary to tear down the refractory soil until it is in good condition. If it is hard and dense, we give it large quantities of stable manure, especially that from stables in which leaves or wheat-straw is used as bedding, seeing to it that it has been well-rotted in the liquid wastes from the stalls. This fertilizes or adds plant-food, as well as causes bacterial action through the humus. If we desire quicker action we plow under a lush-growing legume, such as cow-peas or, in the far West, alfalfa, which are the best humus-producing plants we have, and which not only fill the soil with soil-disintegrating bacteria, but which contain on their roots the bacteria required to produce crops of other legumes, such as peas, beans and many of the flowers, which will not grow without the presence of these necessary agents.

These crops are called "soiling crops" and are of more value to the garden than chemical manure in most cases. The average virgin soil, except that of the arid regions, originally contains a well-balanced plant-ration, but it must be unlocked by the action of the various bacteria. The bacteria of humus, or decaying vegetable matter, tears the soil down, but it is acid in its reaction, on which account, from time to time, we give a top-dressing of lime. Lime should never be given to a worn-out soil, but only to one which has the previous year (or two years) been heavily fed with stable manure or had plowed under cow-peas or a clover crop. In the case of the latter crop, if it be used on the garden instead of a manure, as a humus addition, a dressing of lime should be given before the cow-peas or clover is planted, as the latter, as well as other legumes, will not give a good crop if the soil be not made alkaline before the seed is planted. Legumes do not do well in acid soil. How will you tell whether the soil be acid or alkaline? Very easily. Get from your druggist, for a nickel two strips of litmus paper two inches long, and bury one each in a handful of soil taken from the top and bot-

tom of your soil in the garden, while it is moist. Allow it to remain an hour. If the paper turns red, the soil is acid; if it turns blue, it is alkaline. The degree of redness or blueness indicated the degree of acidity or alkalinity.

It must not be understood from the above that an acid condition of the soil is an abnormal one. Not at all; it merely indicates that the time has come to restore it to an alkaline condition. The operation of tearing down and disintegrating the soil and making it in first-class condition is an acid one, but the operation of feeding crops therefrom must be done under conditions of alkalinity or at the most, slight acidity.

From all the above we gather these facts and apply them as follows: To restore a garden to a state of great fertility we must feed it with great quantities of humus, not, as used to be supposed, to feed the plants, although that incidentally takes place if the manure is very rich, but to make the soil mechanically perfect, and then we put in it the ingredients that are lacking by using commercial fertilizers, such as phosphoric acid, potash and nitrogen, but the former must come first. A garden soil of pure phosphorus, potash and nitrogen would be of little value if the bacteria of humus had not acted upon it.

The phosphorus and potash are present in unavailable forms in most soils (excepting in the arid regions), and it is the function of the humus-bacteria to unlock them and make them available. Hence the humus. The most precious ingredient in any soil is the nitrogen. We can put it in the soil in the commercial form of nitrate of soda, but it is not as available as when we get it in its free form from the air—for nothing—hence we dig, rake and trench the garden. There is no other motive for all this hard work! The plants would grow just as well! If it be possible to make a perfect soil, theoretically, by having present in their available forms the three above-named ingredients; if the soil was porous, friable and filled with the bacteria of the legumes, it were foolish to go to the trouble to dig the garden, for the crops will do as well, but it is impracticable to produce such a soil, so we give the soil access to the air, by digging, trenching, raking and fining, in order that it may store up every particle possible of nitrogen, and to keep it loose and in good mechanical condition.

These are the problems which the specialists have worked out and we have the benefit of them. Give your garden deep working, plenty of humus and turn under a legume at least every five years, after a top-dressing of lime as given above, and your crops will be abundant. Many up-to-date gardeners who have studied modern conditions are duplicating their gardens; that is, they are having two garden plots. In one they are growing garden crops, while in the other they are growing sod and legumes and cover crops, for three years, when the latter becomes the crop garden, and the former goes into retirement to be made over for three years. This is the ideal way to manage a garden, especially when the garden represents, as it does in many cases, the living or a great part of it.

It is not possible to market poorly-grown garden crops, as was once the case, for the public has been educated to expect, and will have, only the most perfect fruits and vegetables, and for these will pay the highest prices, while the inferior ones have little sale. This is as it should be, for there is nothing to prevent any one from using the most approved methods—and that word "approved" means something in this day of experiments—as there are bulletins to be had of every experiment station and every agricultural college to advise those who do not know, and the noble work carried on by the agricultural press for the benefit of the farmers and gardeners, regardless of expense, is at the disposal of all. The information in this article is an epitome of up-to-date garden management and contains the germinal ideas of a hundred bulletins.

Give your soil humus for mechanical disintegration, legumes for nitrogenous bacteria and lime for acidity, to which add as much phosphorus and potash as are needed for a balanced soil-ration, and success is assured.

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Big and handsome as the recent numbers of FARM AND FIRESIDE have been, the great Easter Number of March 25th will be the biggest, finest and most profusely illustrated and most interesting number ever presented to our readers. Below we mention a few features.

**This great special issue will be mailed to paid-in-advance subscribers only**, so if your subscription expires before that time, or has already expired, send in your renewal promptly, and you will be sure to get it, otherwise you will miss it.

No other farm journal in the world gives its readers so much for the money. FARM AND FIRESIDE gives you your money's worth many times over. The great Easter number alone will be worth the entire subscription price.

## A Few Special Features

### A Full Page in Colors

#### Of Beautiful Women

A famous artist has painted for FARM AND FIRESIDE the portraits of seven beautiful women. Never before has an agricultural journal secured such a feature, costing thousands of dollars. Every portrait will be in colors. The page of seven American Beauties will be a special insert page on heavy paper, ready for hanging on the walls of your home.

### Another Full-Page Picture

"Forgotten," one of Balfour Ker's greatest paintings, will also be shown on a full page of the great Easter FARM AND FIRESIDE. It is reproduced in monotone and depicts the old family horse standing at the bars waiting in the cold and snow to be taken to his warm stable.

### A Cover in Colors

The Easter number will have a beautiful cover in colors, which will please every reader. It is a handsome picture, worth preserving and makes a total of at least three full-page pictures that our paid-in-advance readers will receive in the March 25 issue.

### A Thrilling Love Story

It will keep you absorbed from start to finish. Love, adventure, fine deeds, passion, all go to make this one of the best stories you have ever read.

### The Easter Sermon

By the Rev. Charles F. Weeden, Pastor of Howard Church, Boston, who is one of the most famous preachers in America.

### Easter Day in the World's Greatest City

A brilliant and intensely interesting description of what Easter Day is in New York—the greatest day in the greatest city in the world. Many handsome photographs.

### Easter Fashions

The latest styles and how to adapt them inexpensively to your own needs.

### Big Agricultural Features

Are you interested in tree planting? Forrest Crissey has a message for you. Prof. F. H. King tells the devices by which Oriental farmers have conserved their potash and phosphoric acid for thirty centuries. Another of Mr. Streeter's articles on the middle-man question—of vital, timely interest.

## A Limited Offer

Good Until March 15th Only

### Farm and Fireside

For the next 8 months

Sixteen big numbers, including the Great March 25th Easter number, special stories, departments and agricultural features.

All For

# 25c

If your subscription expires before March 25th and is not renewed, you will, of course, not receive the March 25th Easter Number.





# All Six For \$1.00

THIS is the biggest value for \$1.00 ever offered. You can get the best City Weekly, the best Farm Papers and the best Home Magazines, together with an Exquisite Art Calendar, all for one dollar, if you act at once. Each comes for a whole year. You can have them sent to one or to different addresses.

## Here Is Our Great Offer:

**Chicago Inter Ocean and Farmer**  
One Year Subscription 52 numbers  
**FARM AND FIRESIDE**  
One Year Subscription 24 numbers  
**The Woman's World**  
One Year Subscription 12 numbers  
**The Household**  
One Year Subscription 12 numbers  
**The Missouri Valley Farmer**  
One Year Subscription 12 numbers  
**The 1910 Baby Calendar**  
Packed in a tube, postage prepaid

ALL SIX FOR

**\$1.00**

New or Renewal

## All The Above For Only \$1.00

THINK of getting all these great papers and magazines at this low price, 112 different papers at less than one cent each. Every one is a paper of national reputation—large and well printed—one that is sure to be of tremendous interest and usefulness to all the family. The small sum of \$1.00 will secure for every week of the year an abundance of good reading, news and useful information. In no other way can you get so great value for so little money.

## What You Get

**The Chicago Inter Ocean** gives the latest national and world news fresh every week. The Inter Ocean is the greatest newspaper in the country going to farmers' homes.

**Farm and Fireside** has been greatly improved and enlarged at tremendous expense, making it the biggest and most progressive farm paper ever published. Interests all the family.

**The Woman's World** has the highest paid staff of writers of any woman's paper. Woman's World is read with intense interest by more women than any other paper.

**The Missouri Valley Farmer** The great paper of the corn belt—is of interest especially to those in the greatest farm section of the world. Packed with practical information.

**The Household** is the favorite magazine in over 500,000 homes. It has hundreds of pages of interesting stories. Many fine departments, fashions, cooking, poultry, gardening, etc.

**The Baby Calendar** is the most beautiful calendar ever made. It is an art masterpiece printed in many colors with no advertising of any sort. Every time you look at the handsome sleepy boy you are simply fascinated and want to yawn, too. The Baby Calendar is 11 inches wide and 17 inches long, printed on handsome deluxe paper. It is sent carefully packed, postage prepaid.

## Send For Them To-day

For One Dollar you will receive a subscription to each of the five magazines for a whole year, and the 1910 Baby Calendar. This offer is limited. You can have each paper sent to any address you choose or all to your own address. They may be new or renewal. Send for them to-day.

**FARM AND FIRESIDE, Springfield, Ohio**

# Get a Watch and Fob Without Cost

**Boys:** Here is your chance to obtain a handsome and useful watch, having a leather fob and gilt metal charm engraved with your own initial letter without cost.

**Description:** This watch has a handsome nickel case, with open face. It is a stem-wind and a stem-set, just like other high-priced watches. It has a close-fitted snap back. It is only 3/8 inch in thickness. It is a perfect timekeeper, tested and regulated before leaving the factory. It is engraved front and back, and is a watch of which any one would be proud. The Fob is of handsome black leather with a polished buckle, like illustration, with a rich gilt charm engraved with your own initial.



**Movement:** Regular 16-size. Lantern pinion (smallest made). American lever escapement, polished spring. Weight, complete, with case, 3 ounces. Quick train, 240 beats to the minute. Short wind, runs 30 to 36 hours with one winding. With each watch a guarantee is given for all repairs free for one year.

## How to Get the Watch

We will send you this handsome watch and fob, without cost, if you will get eight friends each to take Farm and Fireside for 8 months at a special price of 25 cents

Just send us your name and address on a post-card or letter, to-day, and say that you want the watch. We will send you by return mail a book of 8 coupons, each one of which is good for a special eight-month subscription to FARM AND FIRESIDE. We will also send you a sample of FARM AND FIRESIDE. This outfit will help you a great deal in getting subscrip-

tions quickly. You sell the coupons to your relatives and friends at 25 cents each, send the 8 names and \$2.00 to us and we will send you this grand watch by return mail. That is all you have to do, it is easy to sell coupons. Thousands of boys have done it, you can do it in half a day if you try.

Write to us at once.

**FARM AND FIRESIDE, Springfield, Ohio**

# Fire Horses

By R. M. Winans

THERE has always been a great deal of romance associated with the horses of the fire departments of the large cities; and with everybody and everything else connected with the gallant fire laddies and their work.

There can be no possible objection to that, to be sure, for they have one and all earned every bit of the greatest and lightest praise that has been bestowed upon them for doing many heroic deeds beside which mere, imaginative romance is tame and meek indeed.

But those who know best the lives and work of the men and horses who make a business of fighting fire know that there is far less of romance than there is of hard, slaving, work-a-day drudgery, in the performance of duties that lead them to stand often face to face with death in many forms and to accept the hazard of a hundred dangers as a part of the routine of their daily lives.

There is no doubt that some romance comes now and then to brighten the monotony of tiresome work; but the fire-fighting folk and horses, too, find the most of it to be mighty hard, stern romance.

The fire-fighting horses are, as a rule, well cared for, but their life in the department is one of work; hard, gruelling work—the kind that kills.

Now and then in the fast, wild, mad runs that are made in the large cities the life of a fire horse is sacrificed to save a human life. A pedestrian, with mind far away trying to solve some business problem, a woman, losing her presence of mind in the blare of bells and whistles, a group of children at play, too interested in themselves to heed the warning of the gongs that foretells the approach of flying, pounding hoofs and whirring, grinding wheels, find themselves perilously near this galloping death, the hot breath from the red distended nostrils of the plunging, rearing animals almost in their faces, their sharp-shod hoofs near striking distance.

The cooler-headed grown-ups may spring aside in time to avoid collision, but the child usually grows bewildered and confused, standing trembling and paralyzed with fear, gazing helplessly into the face of the onrushing whirlwind of death.

It is then that the mind of the blue-coated driver high up on the engine seat behind his spirited steeds must act—must think with the rapidity of lightning, decide quickly and do whatever will save those in danger, regardless of the safety of himself, the horses or his machine; and many a heroic driver has plunged to his death in the saving of life at such moments as this.

The other day a hook-and-ladder driv-

er swung his truck around a corner and up through a lane of crowded vehicles, and as he swung into the straight-way he saw before his horses' heads a little girl, scarcely more than a baby, playing all unconscious of danger, squarely in the center of the path he must follow. There was no room to swerve from his course, no time to halt the momentum of his ponderous machine. In a voice compelling as the cry of doom he commanded the child to lie down, then raising in his seat he threw his weight back on the lines to "spread" his team. With an understanding of the situation that would do credit to the human mind, the leaping, plunging horses fell away from the pole so that the quivering little bundle of humanity before them might pass between the two, and when they came to her they raised on their haunches and leaped over the space where she lay, and when the truck had passed she ran to safety, unharmed.

But every driver does not find himself so fortunate in being able to avert a tragedy. In one of New York's streets teeming with children at play a driver some weeks ago bore down on a couple of children so closely there was no chance for them to escape the crashing hoofs. With a mind single to the safety of the little tots this iron-nerved driver deliberately swung his plunging horses full into a great iron pillar of the elevated railroad. Two horses were killed, the other had to be shot, the engine was wrecked and the brave driver mortally injured—but the children were saved.

This is only one of the many heart-breaking things that happen nearly every day in some city in the country, and the plunging of these horses to their death are pathetic incidents in the hazardous lives of horses in the fire department.

Some of these horses exhibit a degree of sense almost equal to human intelligence. A wonderful exhibition of this was given recently in a town in New Jersey. A daily drill is held at nine o'clock. "Big Jim," a seasoned veteran of Hose Company No. 1, stands facing the dial of the big engine-house clock. On a certain day this clock was about five minutes fast. It is not connected with the electric alarm system that sounds the gong. Just as the hands on the dial pointed to the hour of nine "Big Jim" leaped from his stall and made a dash for his place under the harness of the truck. Instantly the other horses followed. A couple of minutes later the tower bell pealed forth the call to drill. But "Big Jim" had read the clock and was not going to be behind time, gong or no gong.

# Where Birds Stay at Night

By John T. Timmons

CHILDREN often ask where all the birds go at night. It would seem to one not familiar with their habits that many of them would find difficulty in securing a suitable place to spend the night.

An observer will notice that birds become quite active as twilight approaches. Many kinds, such as blackbirds and crows, have regular haunts, and as the sun nears the western horizon thousands of these birds may be seen flying in great flocks toward a certain orchard or grove. Many select a thicket in some lonely hollow, while others will select some large lawn where shade-trees stand.

Crows often select a dark deep hollow with trees and bushes on all sides, where they form a sort of rookery. They like dead trees to roost on, and in some places they visit certain favored spots until their continued occupancy kills many of the trees.

Crows and blackbirds are quiet during the dark hours if unmolested, but occasionally some enemy besides the human hunter will disturb them, and there is a great chatter and fluttering of wings. A hungry owl or a cat with some of its wild nature still remaining will frequently visit such a place, and of course has no trouble in securing a meal. Such a visitor often disturbs those near, and the frightened birds will flutter and fly away to seek another roosting-place.

Swallows, after a day spent in skimming the air and catching hundreds of insects, will seek a roosting-place at night. The chimney-swift will soar and dart about until after sunset, and then suddenly dive into some chimney. The birds have very sharp-pointed claws and cling on the sides of the sooty flues. Old or

unoccupied factory smoke-stacks make excellent places for the chimney-swallows, where they roost in vast numbers.

In some of the country districts, and especially along wide river bottoms where the conditions seem to provide a fine place for birds to catch insects, there is a swallow that likes to find a hollow tree for a roosting-place at night. In early spring, before robins begin to nest, these birds gather in large numbers in some group of trees or grove, where they sing until almost dark. They remain quiet until the first signs of day, when they break forth in song, filling the air with the sweetest of music. As soon as they begin nesting they do not collect in such large numbers, but each pair seeks a sheltered roosting-place near the spot selected to raise their brood.

Some birds roost in very much-exposed places, not seeming to realize the danger from their enemies. Others will select protected spots, and secrete themselves in such a manner in the foliage of the trees and vines that even their enemies cannot find them. Many birds choose a natural shelter from the rains by getting beneath a leaf which sheds the water from them, while others sit out in the open, taking the storm in all its fury.

Quite a number of birds roost upon the ground. All sorts of places are chosen. Quail sit in a circle with their heads out, always ready to fly if disturbed. They have been seen sitting in such a position in daylight. Many small birds roost in large weeds, and others select a tuft of grass in which to spend the dark hours. Quite a number of birds build their nests on the ground in pastures and meadows.



## With the Editor

EVERY time a word is said for the parcels post a wail goes up from the retail dealer. The retail dealer is ordinarily a fine member of the community. Sometimes he is a good business man. But when he asks that progress be held back that he may be allowed to live, he becomes a bleating animal baa-ing for favors. He should remember that it is the fighting animal that survives in business and sits at table, the bleating animal being on the bill of fare. If the retailer cannot adjust himself to the competition of these days, he must go the way of the incompetent—to the menu.

From Alliance, Nebraska, comes a letter, the whole of which appears in the first sentence, which runs thus: "In your issue of January 10th the article entitled 'The Farmers' Lobby' was written for the financial benefit of your advertisers, mainly the mail-order thieves and liars." This is a retail merchant's bleat, but we do not believe it is typical of the intelligent retail merchant.

The retailer may think that he is fighting the mail-order houses when he fights the parcels post. This shows that he is an incompetent. If he were up to the game he is supposed to be playing, he would know that the mail-order houses are not out for the parcels post. They are doing quite well as it is, thank you. They are big enough to make terms with the express companies, while their budding competitors are kept down by their inability to do the same. The retailer is being crowded to the wall by the mail-order houses, he cries; but he may be assured that no parcels post law would add a pound's weight to the pressure. The tremendous success of the mail-order houses has been won by their making the most of the opportunities open to them under the present conditions. Our Alliance correspondent may rest assured that in favoring the parcels post we are not in any way grinding the ax of these commercial giants. They have ax-grinding departments all of their own.

If the retailers cannot compete with "thieves and liars" they must be doubly incompetent. The greatest mail-order house in the country sold fifty-one million dollars' worth of goods last year and its annual statement showed net profits of more than six million dollars. Every parcel was sent out on the money-back plan. Such a volume of business cannot be done except by honesty and fair dealing. The mail-order house does business at a great disadvantage. The customer cannot see the goods. There can be no consultation between buyer and seller. And yet this one house did a business of fifty-one million dollars last year. If the retailers were really competent, there ought to be no difficulty in meeting such competitors.

Any savage can fight; but it takes intelligence to cooperate. There are retailers enough in Nebraska to make up as effective a merchandising concern as the biggest of the mail-order houses if they would cooperate. The British shops almost all buy coöperatively, and own their own wholesale establishments. Last fall an agent of a coöperative organization of British dealers attended a grain-growers' association in North Dakota and made arrangements for the direct buying of wheat for its mills. This cuts out all the middlemen but the retailer. The retailers of Nebraska should cease to bleat about the mail-order houses and begin organizing like intelligent men. They should own their own wholesale warehouses. They should copy the mail-order houses in dealing directly with producers and cutting out the expenses. And the farmers should organize to market their produce coöperatively. Whether farmer or retailer, the animal that bleats becomes veal or mutton or spring lamb, and goes down the throat of some one stronger. In union there is strength. And the parcels post is a tool needed by the competent retail trade far more than by the mail-order houses.

Our esteemed correspondent should know that the paper that prints editorials for the benefit of advertisers never benefits them. The editor of this paper does not know whether or not a single mail-order house will advertise in FARM AND FIRESIDE the next issue—or ever again. And he does not care. If the paper is written for the benefit of the subscribers, the subscribers will know it—and from the advertising office of such a paper you could not drive the advertisers with a club. The subscribers can tell at once whether or no the columns are theirs or the property of some other. So can the advertiser.

There are papers published for the benefit of advertisers only; but their space is not very valuable. The farm paper, the editor of which never knows what the advertising manager is doing, and the advertising department of which does not know until the paper appears what the contents will be, is the one the advertisers have to come into. Such a paper is FARM AND FIRESIDE.

The editor of one of our great monthly magazines told me not long ago that when his journal began the publication of some disclosures very offensive to great interests, the advertising manager came to him in a panic. "We are losing all our railway ads," said he, "and the automobile people are pulling out, and lots of others, too. They say they want to sell to happy, contented people and not to a public distressed with 'disclosures!'"

"Go away!" answered the editor. "Let me alone! I have troubles enough on my hands to make this magazine one the people must read. Get advertising where you can and let me alone, I say! They'll all be back."

And sure enough, when that magazine won its way to every news-stand and to a high place in the sales, they came back. And the editor was proud that they came back because his circulation commanded them back and not because he cringed to power or crawled to capital.

I wonder if our Alliance correspondent can understand that?

If he can, he can begin to understand that "thieves and liars" are never very formidable competitors.

If he can, he can realize that the business of buying and selling, either in merchandise or printed paper, is based on mutual self-respect and honesty.

And it should begin to dawn on him that he can't expect the twentieth century to hold back progress in transportation for the benefit of men who can't compete with other men who can sell fifty-one million dollars' worth of goods a year without ever seeing a customer. The kingdom of heaven, like the kingdom of heaven, is within you. And it is found in the spirit that welcomes progress in steam or electricity or parcels post and swims with its beneficent stream.

\* \* \*

THE editor of FARM AND FIRESIDE recently sat at table with a company of people of exceptional intelligence, when a bundle of letters from our subscribers was handed him. He read one of them to the company. The one called for another, and soon he found himself reading letter after letter from farmers and farmers' wives to a group of men and women capable of properly rating such utterances. One of them was a millionaire manufacturer known as well for ability in writing as in manufacturing. One—a woman—had delivered, the evening before, a most scholarly and artistic lecture on a literary subject. One was a lawyer of fine ability and humanitarian tendencies.

And all of them were struck with the fine discrimination, the mental grasp, the unwavering appeal to the sense of justice with which these letters were filled. Most of the letters were on the subject of the proposed advance in postal rates on second-class matter. There was not a wild appeal to passion in the package. There was not a letter that would not have made President Taft ponder deeply for an answer to it. They were from every quarter of the nation, and they were unanimous in opinion and almost similar in style. They were the most striking proof possible of the wide-spread interest in public affairs, the solid common sense and the universal spirit of fairness of the masses of the people. To him who fears to trust the people, such letters would be a revelation. For they show that if there is any dangerous ignorance in this country, it is not in the common people. The Lincolnian impress is on the common mind now as fifty years ago. Now, as then, everybody knows more than anybody. If there is any dangerous ignorance in the United States, it is to be found in the learned and cultured classes, and among our officials. The common mind is still the well of wisdom, from which the wise statesman will draw at need. The statesman who does not is—well, he is not a statesman.

To hundreds of letters, this is all the answer we can make. We must thank the writers and let it go at that.

Robert Smith

## How to Buy Soda Crackers in the Country

Next time you go to the store buy enough Uneeda Biscuit to last till next market day. "But," you say, "will they keep that long?"

Yes—

## Uneeda Biscuit

are the soda crackers that come to you protected in sealed packages, so that you *always* have fresh soda crackers no matter how many you buy or how long you keep them.

5¢

(Never Sold in Bulk)

NATIONAL BISCUIT COMPANY

## Ten Post-Cards For The Asking

These ten post-cards are the famous Flower and Poet set. They are printed in gold and fourteen colors and will delight you. They are yours for the asking.



Each card contains a favorite flower printed in the exact natural colors, outlined in gold. This is the newest way of printing post-cards and makes a very handsome and rich-looking effect. It is the most expensive way of making them up, but we have succeeded in getting the most perfect and beautiful post-cards ever made.

In addition to the beautiful flowers—so real that you can almost smell their fragrance, each card contains a well-known saying of some famous character, printed in gold letters. These are the newest and most fashionable post-cards. Every one who gets them will be delighted beyond measure.

### A Great Offer

These cards would sell for 30 to 50 cents in a store, but we will send them to you without cost if you will send us three 2c stamps to pay the cost of postage, packing and handling. We will tell you how you can get more post-cards without cost, when we send you the cards. Do not fail to get a set. Send three 2c stamps to-day to

FARM AND FIRESIDE  
Springfield, Ohio

FARM AND FIRESIDE,  
Springfield, Ohio

Gentlemen:—

Please send me at once the 10 Flower and Poet post-cards for which I inclose three 2c stamps to pay cost of postage, packing and handling.

Name.....

Address.....

CUT OFF AND MAIL THE COUPON NOW



# Miss Selina Lue and the Soap-Box Babies

[CONTINUED FROM PAGE 28]

"Yes, that's a young man artist I've got boarding here with me. His name is Kent, but he is jest sich friends with everybody on the bluff that we all call him by his first name. His father is a big rich man, but it seems like with all his money he can't afford to let his son be happy and do the world good by painting beautiful pictures. He never said a word about his trouble, but Miss Evelyn Branch told us about it. The poor boy grieves so over his father that I feel I could do jest anything to help make 'em up. He has painted some beautiful pictures to go in a hall for workmen to see how beautiful work can be painted about, and he hopes his father will see 'em and maybe forgive him fer painting. I never close my eyes at night without making it a subject of prayer to soften that old man's heart."

"Did he say his father was a hard-headed old pig-head?" asked the old gentleman fiercely.

"No, indeed; he never!" exclaimed Miss Selina Lue hastily. "You don't know Mr. Alan! Why, he's jest that tender and good that you would know he loved his father hard. But how his father could not know him enough to trust him to do his man's work in the world, I don't see. Looks like a man must think his own life have been a grand success if he goes to a-directing of his son's."

"And this Mr. Alan—er—er—you say he lives here? Been here long?"

"Long enough to git into the good feelings of every man, woman, child and puppy on the bluff, and to git Miss Cynthia to loving him enough to marry him as soon as he finishes the pictures and gits paid fer 'em, which she wouldn't wait fer, but he thinks they better."

"Married!" the old gentleman exploded the word and lay back in the chair and fanned himself with the palm-leaf fan Miss Selina Lue had handed him when he came.

"Yes, Mis' Jackson Page's daughter, and a blessed angel of light she is. It's jest one of the most beautiful and happiest things in the world, if it wasn't for the mortgage and the father."

"Mortgage—father?"

"It ain't his father's mortgage; it's Mis' Jackson Page's, and she ain't resigned about selling her home to the golf club. Poor Miss Cynthia has to spend all this love-time of her life a-persuading of her ma to be contented. The poor child is all drug out with worrying, and it nearly kills Mr. Alan not to be able to help her none. He sets here 'way into the night with me a-talking and a-studying what to do to keep it from being sold Saturday."

"Well, where is this young man, may I ask? I would like—er—to see him—er—where is he—d'you hear?—where is he?"

"Le'me see! Him and Miss Cynthia is off sketching, but I have plumb forgot where they said they would be. But he'll be coming back in a little while now, and I want you to stay and have dinner with us and git a chanct to talk to him and maybe see his pictures, too. I would admire to have you. Seems like I have seen you before somewheres, your face have sich a friendly favor, and here I've been a-telling you family affairs like I had knowed you all my life."

"I thank you, madam; it will be a pleasure to accept your hospitality—d'you hear?—a great pleasure!" And the old gentleman smiled so pleasantly that Ethel Maud sidled up to him and grasped the corner of his coat.

"Say, mister," she ventured, "do a otter-mobile feel like flying in the air? Bennie says it ain't no better than a 'lectric, but a 'lectric is hitched down top and bottom and it don't look so free."

"Naw, mister, I said I knowed it was stylisher, but I bet it can't go no faster," said Bennie.

"Well, I tell you what we will do," said the old gentleman with a delightful smile. "There comes Wilkins, and as soon as he fixes things up we will all take a little spin up the road before dinner, and you can decide for yourself how near it comes to flying. May I have the pleasure of your company, madam—d'you hear?—that great pleasure?"

"Well, it do look like I oughtn't ter let my skeer keep the children from sich a educating thing as a otter-mobile ride, which they never will maybe git again. Thank you kindly, mister. And you can git 'em all in, do you think? They is three more in the back of the grocery what you haven't seed, and I will have to pick up young Jim Peters, fer his mother have gone to town, and I promised to listen across the street fer him to wake up."

"Oh, yes, Miss Selina Lue, you cau pack in all the littlest ones, and me and Sam Tyne and Ethel Maud and Luella can hang on behind," urged Bennie.

"Then, I thank you, sir, we'll all go," said Miss Selina Lue, with courage in her face and voice, but quaking in her shoes. "Now run to the pump, all of you, to wash your faces and hands."

In a few minutes she appeared at the door with the soap-boxers in her arms and announced herself as ready. Ethel Maud had picked up Blossom, and Luella had darted across the street for young Jim.

With a great flourish of manner their beaming friend seated Miss Selina Lue in the tonneau, and under her direction he packed the children in around her.

"Let's see, I can hold both the Flarities in my lap and prop Clemmie and Pattie in on this offside," she directed with an eye both to comfort and security. "Luella can set on the seat by me and hold young Jim in her lap. No, Bennie, I can't let you hang on behind; you and Sammie set on this little side seat and Ella Virginia and Ethel Maud on that one. Ethel Maud, you take Blossom in your lap and help one of the others by the sleeve to stand up in front of you. Everybody else fill in the cracks where they can! Now, we are all ready, mister, and you can let him go as soon as you are a mind to."

Miss Selina Lue's merry eyes were dancing with excitement, and the wide garden hat that Miss Cynthia had trimmed with purple lilacs was set at a rather adventurous angle over her soft hair, which was flying tiny gray curls in every direction.

"Lands alive! won't all the folks over to the landing be surprised if they come back and find us gone?" she exclaimed. All her neighbors had sauntered over the bluff to take dinner-pails to the men passing on the noon boat.

Perhaps never in the history of the "otter-mobile" family had one carried such a load of jubilant, seething joy as was packed in that very fashionable member. As it whizzed and spun up the river road all the passengers squealed with delight, and as they coasted down the other side of the hill they rose to their feet as one child. They danced and yelled, waved whatever head-covering was possessed by one or two of them and stepped on one another's toes in a frenzy of delight. At the top of the far hill they slowed up, for their host was impressed by the sweeping river view, and he turned to point it out to Miss Selina Lue.

"Yes, I have set on the grocery steps and watched the top of this hill in winter and in summer, sun-up and sun-down, in storm and clearing, and all the time a-wondering what was here on the other side that I

never expected to see in this life. I am glad I always laid it out in my mind as beautiful as I could, fer I wouder been ashamed if I had gone and made little of it to myself, just because I hadn't ever seen it and maybe never would. Things always measure up to what you expect—and it's the same with people, too; a-looking fer saints you are mighty apt not to run on sinners. Now, Sammie, Bennie, all of you stop climbing out!"

Miss Selina Lue was busily engaged in settling the squirmers as the machine swept slowly around and started down the hill. A far, faint cry reached her ears, and she turned suddenly.

"Lands alive, mister," she called "we've done spilled Ethel Maud."

"How ever did you happen to fall out, honey?" said Miss Selina Lue, as she squeezed up Ella Virginia and started to tuck the stray down beside her.

"I didn't fall! I climbed—I climbed—to get the gentleman a flower—and now it's—done broke!" she sobbed, as she held up a crushed blue corn-flower.

"Upon my word, that's a sweet little girl to get a posy for an old man—d'you hear?—a sweet little girl! Come over here and sit by me and I'll hold you in, and the baby, to."

And the moment they came to a standstill they were surrounded by the mothers of the joyous youngsters and a babble ensued that was confusion confounded.

Mrs. Kinney clasped her wriggling offspring as they were handed down to her in turn, and with each she managed a "Thank you, sir," that sounded as if they had been returned from the grave to her maternal bosom. With the last in her arms she turned and said: "Miss Selina Lue, I thank you fer this a-happening to 'em what they won't never forget."

Mrs. Dobbs affirmed the remarks of Mrs. Kinney heartily, but she was overcome with a shyness two hundred and ten pounds in weight, so could only nod. Her pride in the exalted position of Ethel Maud was overwhelming, but she lifted down Kinneys and Tynes with impartial delight.

At last there were left only Ethel Maud and Blossom to descend, and the old gentleman took the baby while the child slowly climbed down, assisted by her mother and Bennie.

"My, my!" exclaimed Miss Selina Lue. "Looks like when you git 'em all together this bluff is rich in children. Who's going to take Blossom. Everybody have got a armful and more." And she was just about to deposit Carrots on the steps when she exclaimed: "Lands alive, if here ain't Miss Cynthia in the nick of time!"

And so it was into a pair of very lovely arms that the old gentleman lowered the gurgly baby, and he had a look into beautiful and very deep blue eyes; and with the look something welled up and overflowed a certain arid and anger-wasted area in his large old heart, and in the twinkling of his keen, dark eyes the waters of forgiveness had made it to bloom with its accustomed flowers of good cheer, generosity and the star-bloom of peace. His journey for the purpose of incriminations became one of discovery of treasures long possessed, but unacknowledged—and others to be possessed.

It was at this auspicious moment, as the mothers were all absorbed in questioning, in listening to the children and exclaiming over the wonders of the expedition with Miss Selina Lue, that Mr. Alan stepped from around the corner of the grocery and stood at the side of the "otter-mobile" before he knew of its presence. And before he had time to do or say anything the old gentleman reached down

and gave him a tremendous squeeze directly before the astonished gaze of Miss Cynthia and Blossom. Then he went to still greater lengths, for he hopped down as nimbly as Bennie could have done right between Miss Cynthia and Mr. Alan and gave them both a tremendous squeeze, Blossom included. And all the time never a word passed between them, only Mr. Alan's eyes were very bright and his hand trembled so that Miss Cynthia took it in her free one and Blossom caught his sleeve.

"Well," said Miss Selina Lue, "well! I oughtn't to ever pray keardless, for the Lord shure listens to me! Mr. Kent, I oughter have knowed you by the eyes of faith. All of you come here and be made 'quainted with Mr. Alan's father, what's come to make us a visit. And to think I didn't know him—and they do so favor!"

The day of adventure and excitement came to a close for Miss Selina Lue as she sat on the grocery steps in the moonlight, waiting for Mr. Alan to come down from the hill mansion, where he and his father had been dining with Mrs. Jackson Page. When he came they sat silently for a few moments while he finished his cigar; then Miss Selina Lue said, as she laid her hand on his arm:

"Mr. Alan, honey, I know what a heft of trouble have been lifted off your heart this day and I've been setting here a-rejoicing over your coming through so good. Looks like in all the world they ain't nothing that jest grinds down on the heart like unkind feelings where love oughter be, especial in blood kin. I am thankful I feel a long and loving life fer you and your father together, fer you've both done had a lesson in being away from one another."

"Miss Selina Lue, I don't know what you said to him, but when I offered to spend the night at the hotel with him, he said he wanted me to come right back and stay here with you. I believe he is going to apply for a soap-box for me."

"Well, looks like when I think of you and Miss Cynthia having to move away from me to the other side of town my heart jest drops down. I have woke up more than onct wet-eyed about it, but I try and think I will see you sometimes, and all the time I will have the remembering of you to love. The Lord have been good to me in letting me have so many remembers and I ain't serving Him right by gitting unhappy, so I won't." As she spoke, she smiled at him wistfully.

"And that's just why I hoped you would wait up to see me to-night," said Mr. Alan as he took her hand. "What would you say if I told you that father is going to buy the hill mansion and all the property for—for—a wedding present—for her? And you'll always let me have the barn, so, you see, we are going to be in big soap-boxes right where you can attend to us the rest of our lives."

"Oh, Mr. Alan, honey, they ain't nothing to say that'll do to tell how I feel! My Lord is jest about to—crowd my heart with blessings." And Miss Selina Lue's eyes shone in the moonlight.

"Miss Selina Lue," said Mr. Alan slowly, as a man speaks from his inmost soul, "in the letter—and my father—they want me to paint one more picture—for the chapel. If I can paint what I feel when I see you with your manger-child in your arms I will paint a picture for the whole world. Perhaps some day—"

"If you do, Mr. Alan, you'll paint the picture of a woman that lives by the loving she gits and gives—and the love of God. But don't make me cry—I'm jest a-smiling through my tears."

[THE END]

## Cousin Sally's Letter to Her Boys and Girls

DEAR GIRLS AND BOYS:—

Many, many thanks for all your good and enthusiastic letters. I am more than delighted to know that my letter on Japan appealed to you and I shall certainly tell you about other lands before very long. I want very much to tell you about Holland, "the little land of dikes and windmills," but this time I am going to have a little talk with you about clubs. In every number I have wanted to tell you about the fine times some of my cousins are having—I mean our club members who have formed branch clubs of their own. Just listen to this letter from one of our enthusiastic members.

OH! COUSIN SALLY:—I cannot begin to tell you how happy our new club has made me, and I think your idea about branch clubs is just splendid. Some girls and myself met one day after school and formed a club which we call the "Merry Maids." This was one of the club names which you suggested some time ago and we thought it suited us perfectly. We have six members and every one is so congen-

ial and pleasant that our club meetings are simply a joy. We try to live up to our name and also to the club's motto, and if one of the members speaks a cross word, or in any way loses her temper, she is fined one cent. Mother hopes the club work will go along smoothly, because, she says I am not the cross little daughter that I used to be.

The other day we girls gave a little entertainment at my home. We charged five cents admission, and really we had quite a large audience. I played, Edith sang, Ethel recited, another member danced, and our dramatic efforts were in every way successful. We made about one dollar which paid for the refreshments which we served later.

Now isn't this the right spirit? You can all form a club of your own and have jolly times like this girl if you want to. Of course a "good time" club would not appeal to every one, but then there are any number of different clubs from which to choose. Another one of my club members writes me that she has just formed a sewing club which meets once a week

and that there are only three members. However, they conduct their meetings in a business-like manner and have such pleasant sessions that the members can hardly wait for the week to pass by so that they can meet again.

Now a word to the boys. I am just as much interested in your work and play as I am in the girls, and I am going to read you part of a letter which I received from one of my club boys. He says:

Your suggestions about branch clubs have interested me so much that we boys got together one fine afternoon and decided to form a club of our own. Of course each member of our branch club is a member of Cousin Sally's club. What do you think of this for a club name—"The Robinson Crusoe club?" There are just eight members and we are almost of one age. This winter we have been having our club meetings out doors and we go for long tramps through the woods and fields. Sometimes we have skating games, and when we get cold we make a nice big bonfire and sit around it Indian fashion roasting potatoes and telling jokes and funny stories. We

are planning to build a rough camp in the woods by a small stream, and I tell you we boys expect to have some jolly good times fishing and bathing. Our club dues are five cents a week, so you see we expect to have quite a little money in the treasury by next summer. We have a very active president and secretary and all of us boys seem to agree. I am so interested in our new club, and Cousin Sally's page is read aloud by the secretary at club meetings.

I could go on and on telling you all about the splendid, enthusiastic letters that I have received from club members, but my space is growing short. I only hope that some day I will have another page to devote entirely to our club work and plans for the future. I wish club members who have formed branch clubs of their own, would tell me how they are getting along. You cannot write to me too often, for your letters are always welcome.

Assuring you all of my constant interest in your work, and with much love.

Faithfully always,

COUSIN SALLY.



# Coupons Pouring In!

## Everybody Buying at the New Cut Prices

**Your Coupon Is in the Lower Left Hand Corner of This Page. Fill It Out NOW!**

We believe the Economy Chief is the best and most satisfactory cream separator on the market today, regardless of price. We believe it to be the best in design, the closest skimming, the easiest running, the quickest cleaning; in short, the greatest separator value that money can buy. We have absolute confidence in the Economy Chief and we want every owner of cows to share this confidence with us. We want everyone interested in buying a cream separator to have an opportunity to find out for himself which is the best machine, which is THE SEPARATOR TO BUY.

## Here Is the Challenge Offer That Is Bringing in the Orders by Every Mail!

**Deposit in your local bank the price of the Economy Chief Cream Separator you want to try, or**

**Send us a letter of reference from your banker stating that you are a reliable person; then**

We will ship to you at once, freight prepaid, the separator you order, with the understanding that you are to set it up and try it on your farm for sixty days. Give it the hardest kind of a test; if possible try it alongside some other well known standard make, such as the best dairy farmers are using. Compare our machine in actual operation with any other. Note the amount of cream you get from each. Compare ease of running, time consumed in cleaning, and make any other comparisons you can think of. Never mind about the price; what you want from a cream separator is CREAM. If any other machine selling even as high as \$85.00 or \$90.00 will do better work, will skim closer, will give better satisfaction than our Economy Chief at \$42.50, our advice to you is, buy the other machine and send ours back.

When you have finished your sixty-day test, if you are perfectly satisfied that you have the best separator on the market, write us saying that you want to keep the machine, and we will send you a bill for your separator and the freight charges we paid on it.

If at the end of sixty days you are not satisfied that the Economy Chief is the world's best separator, you don't need to even tell us the reason for your dissatisfaction unless you wish to; just drop us a line saying you don't want the machine. We will then send you a return address card to tack

on the box and we will not only return all money sent us, but also pay you for your time and trouble in setting up the machine, repacking it and hauling back to the station. We don't want you to lose one penny in trying out the Economy Chief for sixty days.

If you want to send cash with your order, as most of our customers do, you won't lose any of the benefit of the above CHALLENGE OFFER, for if at the end of sixty days you decide you don't want the machine, if you think after a sixty days' trial you can get along just as well without a separator, or if you have seen a separator in operation giving better results than the Economy Chief, just send it back at our expense, tell us how much we owe you for freight charges, hauling from and to the station, setting up and repacking, and we will promptly send you every cent of the purchase price, plus your bill.

### This Is Our Challenge Offer and Our Whole Cream Separator Proposition

We think our Economy Chief Separator is the best machine in the world. We want to sell you an Economy Chief if you think the same as we do, not otherwise, and we make this challenge offer to give you a chance to find out all about the Economy Chief at our expense and to prove our confidence in our own machine.

**IF THE MAKER OF ANY OTHER CREAM SEPARATOR IN THE WORLD BELIEVES IN HIS MACHINE AS WE BELIEVE IN OURS, LET HIM MAKE YOU THE SAME PROPOSITION WE DO.**

**That's all—Now fill out the Coupon!**



### FILL OUT THIS SPECIAL ORDER BLANK

☐ **CASH WITH ORDER.**  
If you are enclosing the full price, simply write the amount in this square.

☐ **CASH IN BANK.**  
You can deposit the purchase price of the separator with your local banker, to be held by him for a month while you are trying it. If you follow this plan make an X mark in this square and enclose your certificate of deposit signed by your banker.

☐ **BANK REFERENCE.**  
If you prefer not to send us the money, or to hold it in the bank subject to our order, make an X mark in this square and enclose a letter of reference signed by your banker, telling us that you are a responsible property owner.

☐ **FREE DAIRY GUIDE.**  
Nearly everybody has a copy of our big General Catalog or our Cream Separator Catalog, but if you have not and want more information before ordering, make an X mark in this space.

Name \_\_\_\_\_

Postoffice \_\_\_\_\_ State \_\_\_\_\_

Shipping Point \_\_\_\_\_ State \_\_\_\_\_

R. F. D. \_\_\_\_\_ P. O. \_\_\_\_\_ Street \_\_\_\_\_  
No. \_\_\_\_\_ Box No. \_\_\_\_\_ and No. \_\_\_\_\_

Send me by freight on trial \_\_\_\_\_ Economy Chief Cream Separator

Size \_\_\_\_\_ Price \_\_\_\_\_

Farm and Fireside. (Please write plainly and carefully.)

### Reduced Prices for 1910

WE RECOMMEND THE BIG 600-POUND SIZE

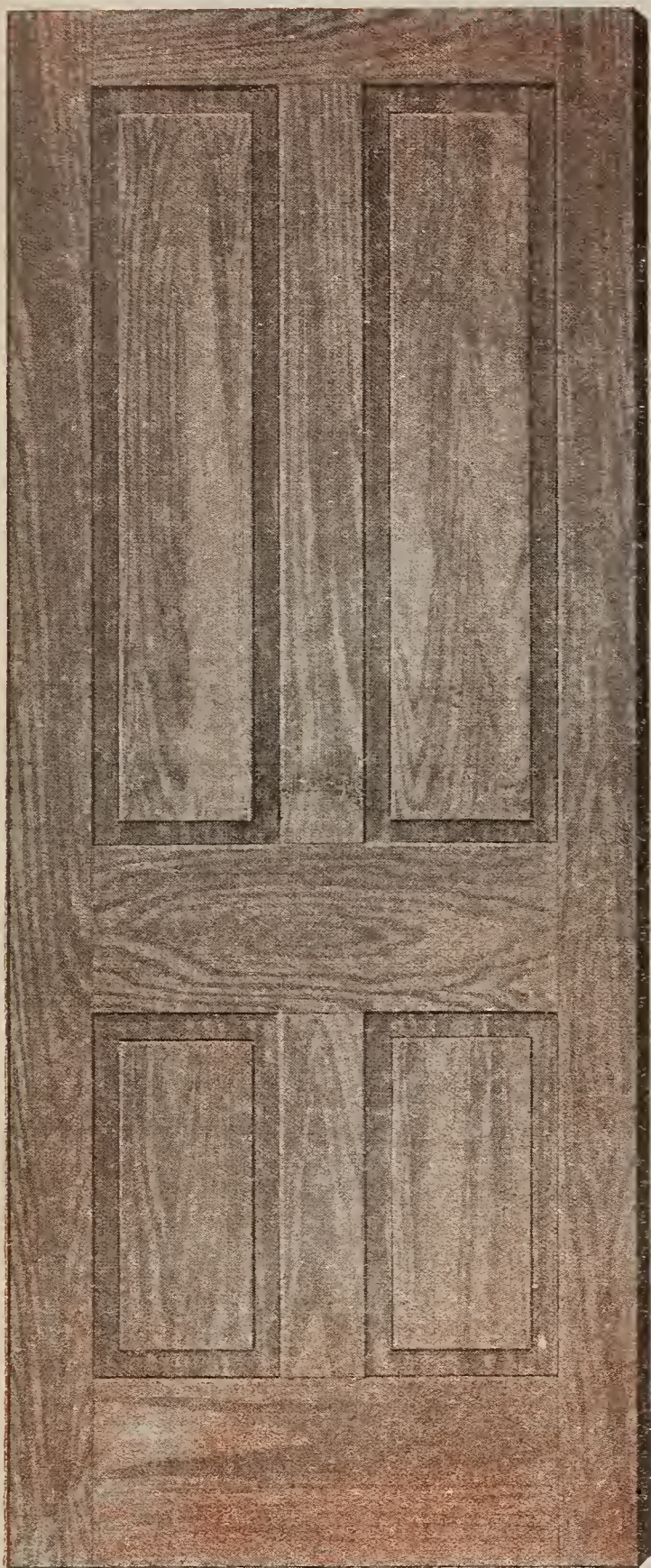
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| No. 23T51 New 1910 Economy Chief.<br>Capacity, 250 to 300 pounds, or<br>120 to 145 quarts per hour. Price<br>reduced to..... | <b>\$27.90</b> |
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# Low Priced Building Materials

## Finest Qualities—Biggest Stocks—Prompt Shipments



**\$1.41** and up, according to size, is our price for this A-Grade White Pine 4-Panel Door

What are you planning to build this spring? No matter what it may be, a house, a barn, a silo, do not let a contract of any kind, do not buy material of any sort until you have first learned our very low prices.

### Do Not Pay Big Retail Prices

Don't be deceived by the universal cry of higher prices for every kind of building material. Don't let any one lead you to believe that the increasing scarcity of timber is responsible for the very high prices now asked for lumber and mill work. While it is true that our forests are disappearing and that lumber should therefore be somewhat higher, remember that the big retail prices now asked by lumber dealers are due principally to the lumber trust and the organizations of retail dealers known as retail lumbermen's associations. The high prices now asked are largely artificial and if you pay them you are simply wasting money because we can save you from one-third to one-half on any bill of lumber or building materials required by you this season. All we ask is an opportunity to prove to you the truth of our claim to be underselling retailers everywhere and giving our customers the very finest grades of lumber, mill work, builders' hardware, plumbing goods and all other materials which enter into the construction of a building.

### Why Our Prices Are So Very Low

The reason our prices are so much below the prices asked by the average retailer is because we are absolutely independent of every combination and association and, furthermore, we buy all of our materials at first hands and deliver them to you at the mere cost of production with our one small percentage of profit added. No middlemen's profit in our prices. No expenses for salesmen, railroad fare, hotel bills, no commissions to brokers or jobbers, no bad debts to be made good out of the profits on your order. Just a plain business proposition of delivering merchandise of the highest quality direct from first hands to the user with just one profit. Remember, furthermore, that building materials comprise just one of many lines of goods sold by us, therefore we are not depending upon our sales in this one department for our profits. We sell almost everything needed in the home, on a farm, in the factory or workshop, in addition to building materials, and on everything we sell we add a very small profit, much less than is usually added by dealers, and these policies bring to you the very latest and best merchandise of every kind at a big saving over the prices you will pay to the average retail dealer. We have factory and mill connections unexcelled. Our stock of merchandise in all lines of building materials is enormous. We are able to make immediate shipments and everything going to you direct from the mill or warehouse without several handlings means that the goods reach you in the best possible condition. This we guarantee.

### You Can Buy Everything You Need From Us

Remember that we sell everything in building material. We sell lumber direct from the mills in the north and in the south, mill work of every kind including doors and windows, storm sash, blinds, stair work, flooring, finishing lumber, ceiling, siding, everything you will need in the way of lumber, at exceedingly low prices. Our low priced builders' hardware is of the highest grade. We sell the best plumbing goods, the higher grade hot air furnaces, the celebrated Windsor steam and hot water boilers, gas plants for heating, lighting and cooking. In short our catalogue shows every building material required by you with the single exception of the masonry materials.

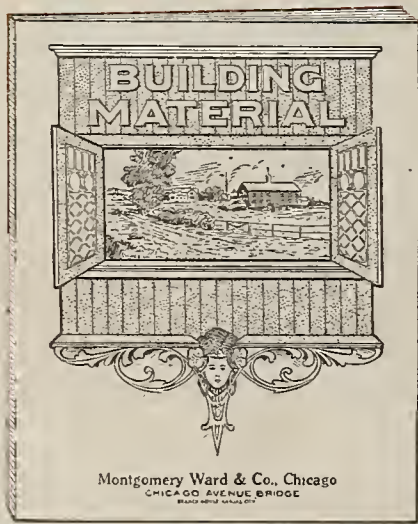
Again we say to you, you cannot afford to buy from any one anywhere at any price until you first see our free Building Material Catalogue as described below.

## Here Are Two Great Books We Want You to Send For

### Building Material Catalogue

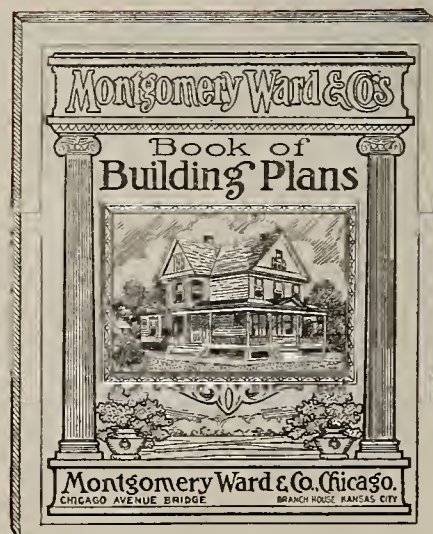
We want to send every reader of the FARM AND FIRESIDE a free copy of this great Building Material Catalogue. It has just been revised and enlarged and if you are going to build this year, you can't afford to be without it. It illustrates, describes and prices everything in Building Materials with the single exception of Masonry material.

Our prices are very low, our qualities very high and you can't begin to get the splendid goods we offer at anywhere near our prices anywhere else. In fact, many of the prices quoted by us are just about the same the dealer pays at wholesale. We have been saving money for thousands of customers everywhere and we will save money for you if you will let us. Just write us a letter or a postal card and say "Send me a free copy of your new Building Material Catalogue" and we will send it by mail, free and post-paid. Write your letter or postal card today.



### Book of Building Plans Free

If you are planning to build a new house this year you will be interested in our new book of Building Plans just out. It has been enlarged—we are showing more up-to-date houses than ever before. This book will help you to save money on your new home and it tells you how to get architects' plans, blue prints, specifications, and everything complete, such as architects charge \$100.00 for, without a cent of expense to you. We furnish building plans free for any of the houses or barns as shown and explained in this Book of Building Plans, and they are extremely valuable because they are the work of high priced, licensed architects. This book and the plans contained in it have been prepared at great expense to us, it is a better book of building plans than many of those advertised and sold by others at \$1.00, but we will be glad to send you a free copy if you will write and ask for it. Don't fail to get it before you build.



## MONTGOMERY WARD & CO.

Chicago Avenue Bridge, Chicago

Nineteenth and Campbell Sts., Kansas City



# FARM AND FIRESIDE

THE NATIONAL FARM PAPER



ESTABLISHED  
1877

MARCH 10  
1910



Gerrit A. Benson  
1910



# Buggy Prices Fully Explained



**H. C. Phelps**  
Bona-Fide Manufacturer of  
Celebrated Split Hickory  
Vehicles

I show you this letter from the publishers of this paper so that you will feel doubly sure about where to buy any style vehicle you may need this Spring. I've been selling direct from my factory to you Farm and Fireside Readers for nine years. In that time I've sold thou-

EVERY year certain buggy concerns that sell through high priced local dealers come out and advertise trying to prejudice people against buying direct from the factory. My Book don't do it. I'm not a "knocker."

You won't find me criticising other people's methods in this big Portfolio Book of mine—It's so full of telling about over 125 latest styles of Split Hickory Vehicles and how I save you \$26.50 and up on prices, that there's no room for anything else but actual color illustrated photographs, factory prices and fair and square descriptions.

Anybody who gets this book and really wants any vehicle, will buy a Split Hickory. Over 100,000 satisfied customers of mine have done so this way.

It means getting the latest style and the most durable vehicles in America and saving \$26.50 in cash—or better—on any style you want.

I've got customers all over the United States—probably right near you—whom I'll refer you to. They are always glad to recommend Split Hickories. That's how I sell so many. Their neighbors see their Split Hickory and want one too.



## Split Hickory Vehicles and Harness Sold Only Direct to the User

Local buggy dealers, and the buggy concerns that sell through them, don't like Phelps' direct plan—or Phelps' one-profit-to-factory prices.

I don't have to charge fancy prices, and over 100,000 customers of mine know it and stand by me—to save money and get highest quality vehicles direct.

I've saved millions of dollars for buggy buyers in the past 9 years and I can prove it. Understand, I guarantee to duplicate any buggy that any retail dealer will sell you and save you at least \$26.50 or more. If I don't, I'll take the buggy back and return to you every cent of your money. When my buggy arrives, take it and use it on my

### 30 Days' Road Test Two Years' Guarantee

Try any of 125 styles of Split Hickories under all conditions. Make any comparison you want to and with any other buggy in your neighborhood. Then, if you are satisfied; if you realize that you've saved as much money as I guaranteed, keep it. And, remember, beyond this 30 days of severest test you have also my 2-year guarantee.

Do you realize that as the actual manufacturer, with my big volume of business, I could sell even the dealer at lower prices than he could buy from any other manufacturer? But, I don't do business through dealers.

### Save \$26.50 and Up

Take this chance of saving \$26.50 cash or more. You're bound to, if you buy from me. It's up to me—the manufacturer—selling direct—to convince you after you send me your name. It costs you only a postal or a postage stamp to write to me. Then I'll do the rest—I'll pay the postage on my Big Free Book to you and write you my plan and prices. Then you be the sole judge before or after you accept my 30 Days' Road Test proposition. Write today—use the coupon here or a postal or letter. Address me personally.

**H. C. Phelps, Manufacturer-President**  
**The Ohio Carriage Mfg. Company**  
Station 27, Columbus, Ohio

As to my standing and responsibility, I refer to this or any agricultural paper, any commercial agency, any bank or express company and to over 100,000 satisfied customers.

—Get This Big New Portfolio Book Free  
—Showing Over 125 Styles of Split Hickory Vehicles and Harness.

Send your name, and I'll pay the postage. Shows a larger range of prices and styles than any 10 retail dealers carry—all at prices saving you from \$26.50 and up—direct from my factory. Write today.

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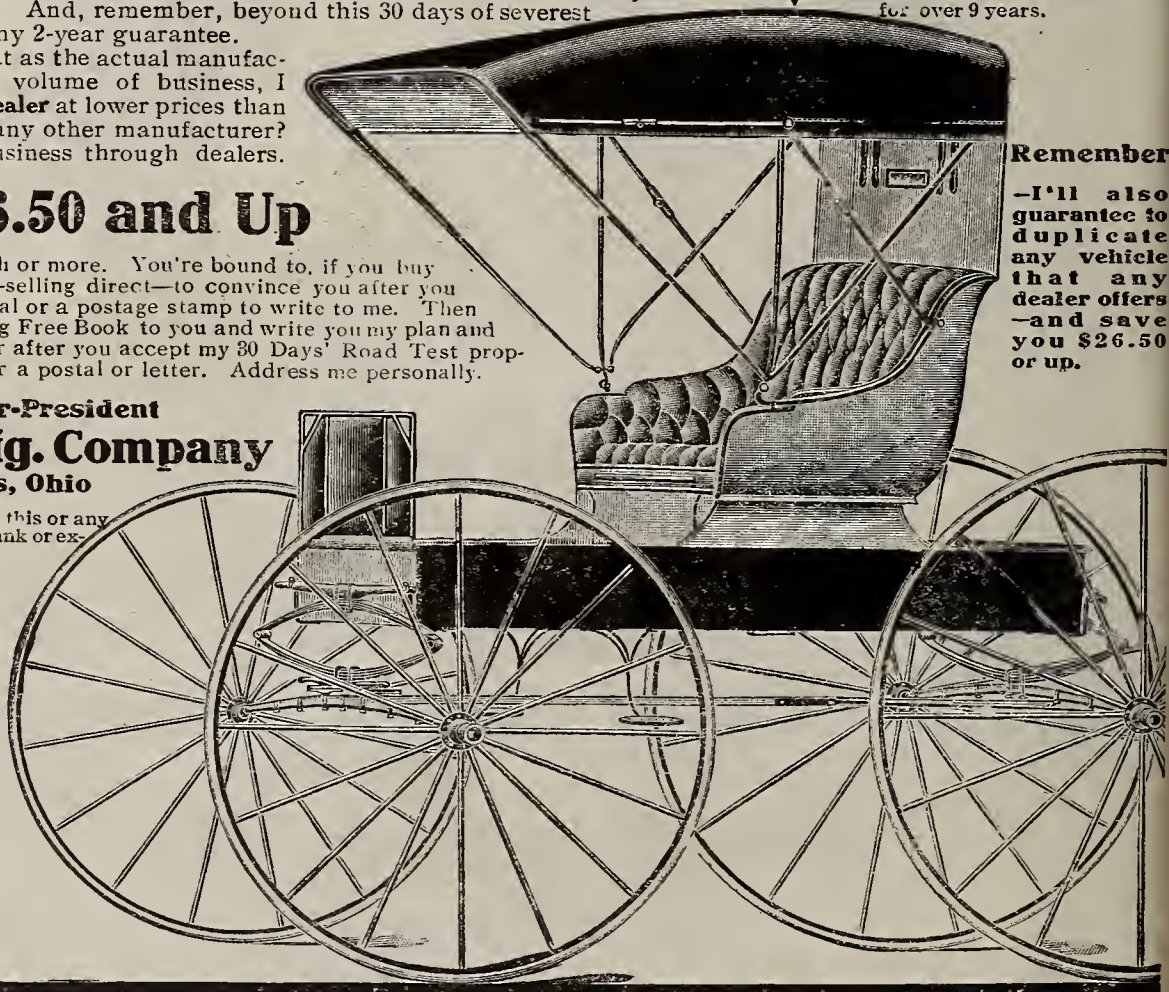
Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

Right here you see the exact guarantee that Farm and Fireside prints in this and every issue to assure its Readers of its Advertiser's reliability. Also read Farm and Fireside's letter to me on the left here to show how Split Hickories have made good for over 9 years.

#### Remember

—I'll also guarantee to duplicate any vehicle that any dealer offers—and save you \$26.50 or up.



### This Split Hickory Laminated Auto-Seat Buggy At a Cash Saving of \$26.50

Among my 125 superb styles for 1910, this is my special, my leader, your best bargain. In addition to the dashing, stylish appearance and comfort of the Laminated Auto-Seats, I offer, in this buggy, 125 Special Features: Extra long top, Water-proof; extra leg-room in body; wide seats; Sheldon's genuine French point springs; soft auto springs in cushion and back; heavy Australian wool broad-cloth upholstery; in fact, every feature possible to obtain, snappy style, easiest riding and greatest durability. Shown in colors in my 1910 Book, with various styles of trimmings, but made to your order—all the finishing touches to suit your taste.

H. C. Phelps.

FARM AND FIRESIDE.  
THE CROWELL PUBLISHING COMPANY.  
11 EAST 24TH STREET  
NEW YORK

January 3rd, 1910.

Mr. H. C. Phelps, President,  
Ohio Carriage Manufacturing Company,  
Columbus, Ohio.

Dear Mr. Phelps:

In reply to your letter of December 31st, we are glad to testify that you have been an advertiser in Farm and Fireside for many years and during that time we have never been called upon by any of our subscribers to refund them any money on account of any transaction with you.

During all this period our guarantee has appeared at the top of our editorial page, as it does today. Under this guarantee we would be asked to refund money to a subscriber whose transactions with you had not been satisfactory. That we have not been so asked speaks for itself.

We are glad to recommend any of our subscribers are doing business with you in the belief that they will have entire satisfaction and get their money's worth.

Very truly yours,

*H. C. Phelps*  
Advertising Manager,  
Farm and Fireside,  
The National Farm Paper.

GHP:1

sands of buggies, vehicles of all kinds, and saved every customer from \$26.50 to \$40.00. And here's a letter from your publishers stating that in all that time not one customer has been unfairly dealt with. It only goes to show that I make good on every point.

### Let Me Pay the Postage You Only Send Me Your Name

Send Your Name By Tearing This Out and Mailing It Personally Addressed to Me—

**H. C. PHELPS, President**  
**The Ohio Carriage Manufacturing Co.**  
Station 27, Factory, Columbus, Ohio

I read Farm and Fireside. Send me your Big 1910 Split Hickory Vehicle and Harness Book FREE—You pay the postage and quote me your Lowest Factory prices—direct.

Name.....

Address.....

To ..... State.....

Cut or Tear This Out—Fill in and Mail Me This Free Split Hickory 1910 Catalog Coupon Today





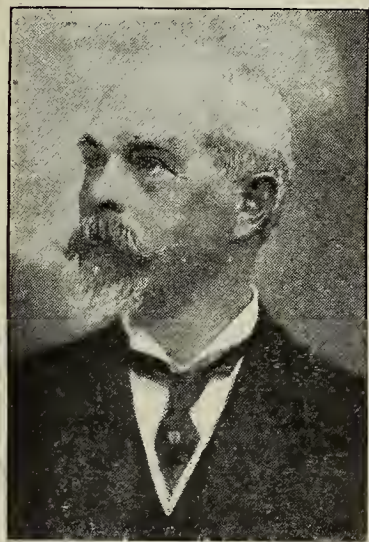
Vol. XXXIII. No. 11

Springfield, Ohio, March 10, 1910

PUBLISHED  
SEMI-MONTHLY

## Our Horsemen's Debt to the Arabs

By David Buffum



David Buffum

**I**F I SEEM to be dwelling too long on the blood lines that go to make up our modern breeds, I can only say that, without a clear perception of the why and wherefore of things, any really intelligent grasp of science of horsemanship is impossible. There are many sea captains who have learned to take observations and work them out by certain formulas which they do not understand, but which, nevertheless, give them the ship's position on the chart. Such men make shift to get

around, it is true, but they never become such skilled and expert navigators as those who not only apply the required formula, but know exactly why they do so.

Among the different horses you have owned there have been some whose skin was thinner and whose coat finer than the others, who, when warmed up a little, would show a fine network of veins under the skin, and when put to some unusually long and hard journey would finish with a nerve and energy that were more and more apparent from beginning to end. Do you know why? I am glad to say, though well enough acquainted with the other kind, that I have had many such and am at present using every day a certain mare, thoroughbred, who, when she came into my possession, was so high-strung, so full of nervous energy, that she had never been known to walk a step, and for this reason was never used by her owner or his family, but always exercised by a groom. Under a little sane treatment (a matter of which I shall have more to say later) she soon learned to go quietly with me. But let the drive be rather longer than common—say ten miles, instead of her usual four or five—and the old spirit and nervous ambition are all back again. And if, on an all-day drive, her muscles get tired, as they needs must, she does not know it and, if I let her, would undoubtedly keep going till she fell in her tracks.

Now this quality, although we have, in breeding, to consider many other things, such as size, style, disposition and the ability to haul a heavy load, is, of all equine attributes, the most kingly; it is the spirit that never quits and never says die. Without it, our race-horses would be valueless and our roadsters no pleasure to use. It is easy enough, and true enough, to say that it is owing to the "warm blood" a horse has in his veins. But this does not wholly answer the question, nor go quite to the root of the matter. What makes warm blood? What gives to our thoroughbreds and trotters their dead-game qualities?

The answer is oriental blood—Arabian or, if not always literally and strictly that, then of a stock so closely allied as to be practically the same thing. It is true that we have to go back a good ways to find it, but there it is, the starting-point, the source and

fountainhead of the highest equine characteristics. Again, why? Because the Arabian horse was bred with reference to speed and endurance and upon the highest standard of conformation and character, from a period so remote that it can hardly be traced. And the fixity of type in any breed—its tendency to reproduce itself unaltered when bred, like sire to like dam, and its prepotency when crossed upon other stock—is in direct proportion to the time it has been bred as a distinct breed without contamination or admixture.

We, whose beards are gray, can recall a time, not so very long ago, either, when the trotter was a colder-blooded horse than he is now and when it was often said, especially by breeders of thoroughbred stock, that the American trotter was of no fixed type and no recognized conformation. Going back a good deal further, there was a time when the same thing could be said of the English race-horse. In the main, his breeders were trying to develop him by simply selecting the best and fastest stock. The introduction of certain animals of Eastern breeding—the Byerley Turk and, later, the Curwen Barb and the now famous Darley Arabian—made an impress so marked that their value could not be ignored; but it was not till the days of the Godolphin Arabian, some twenty years later, that the value of oriental blood, as the true source of speed and endurance, was fully recognized and understood by horsemen.

The story of the Godolphin Arabian is one of the most fascinating in equine history. In common with

charge, whom he had trained and attended from birth. But the present, splendid as it was, made little impression on the French king. The finely-formed, nervous animals were of a type to which he was unaccustomed and of which he knew nothing; differing totally from the heavy French stock, they seemed to him small, insignificant and, in a word, of little value. He gave the slaves their liberty and directed his Master of the Stables to sell the horses for what they would bring. Scham was thus acquired by a drunken teamster, who drove a garbage-cart, and put to work in his new owner's business. What became of the others is unknown.

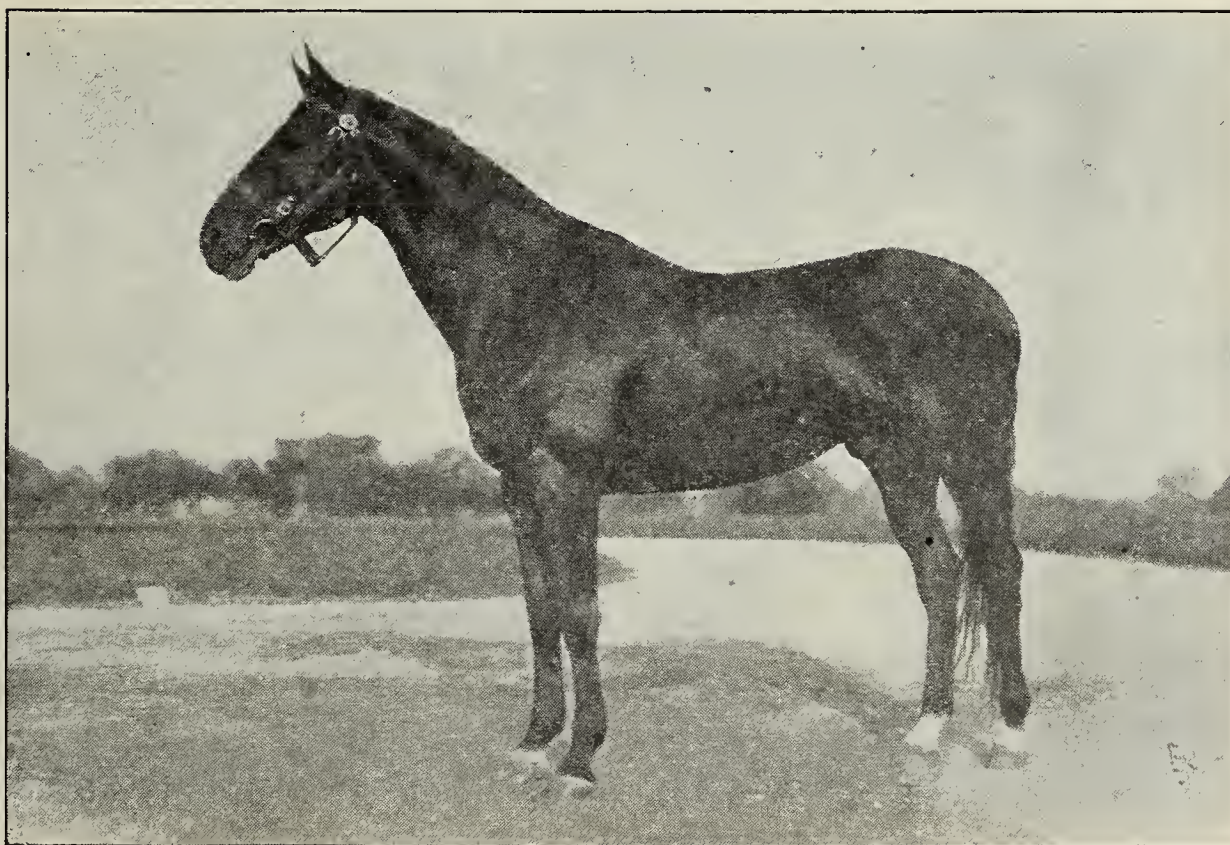
Agba was thus separated from his charge and for many weeks knew nothing of his whereabouts. But he was keenly alive to the fact that, however the horse might be underestimated in France, in Tunis, where king and commoner alike were horsemen, he was adjudged of great value. He resolved to find the horse and, if possible, to acquire him by a term of service. Adrift, as he was, in a strange city and knowing but little of its language, the search was no easy matter, and when he finally discovered the horse—which was late one evening, in one of the poorest parts of the city—he found him miserably stabled, covered with harness-galls and sores, and so emaciated as to be hardly recognizable. He threw his arms around the horse's neck and, with many caresses and words of endearment, proceeded to make him as comfortable as the shed and its meager equipment permitted.

While he was thus engaged the carter appeared. Scornfully (and, perhaps, naturally) rejecting Agba's offer to purchase the horse by a term of service, he ordered the Moor out of the stable. He had no alternative but to obey. But he by no means gave up his purpose. In some way and some time so precious an animal must be rescued from his wretched situation; meanwhile, he must be cared for and his strength kept up. By doing sundry odd jobs about the city, Agba managed to pick up a little money and with this, often stinting himself of needed food, he bought grain and medicine, and surreptitiously visiting Scham at night, he fed him, bathed his wounds and otherwise afforded him what comfort he could. There is little question that the horse would have died during this period, had it not been for this care and attention.

One day an English Quaker, who was staying in Paris, saw Scham pitifully struggling with a load that he could not draw, his master, meanwhile, applying a heavy whip. The Quaker was a horseman, and his practised eye promptly took in the points that the French king had failed to see. Clearly, this was no ordinary horse.

Examining him and satisfying himself of his age and soundness, he at once purchased him of the carter. Agba, who soon learned of the event, now sought the Quaker and told his story—with the result that he was hired as groom for Scham and both sent to the Quaker's country seat in England.

Thus the horse first found himself on English soil and, under good feed and treatment, he soon regained his original beauty and spirit. Indeed, he regained the latter in too large a degree, for the Friend's family, accustomed as they were to colder-blooded animals, became afraid of him and he was sold to a livery-stable keeper, named Rogers. Agba, greatly chagrined at the occurrence, left the Friend's employ and sought a position with Rogers, but the latter refused to hire him. This proved a mistake, for Scham was getting more grain than he was used to in his native land and he needed skilful management. Under the care



The Thoroughbred Type—Nervous Energy Concentrated in a Light, Clean, Muscular Body

the accounts of much that occurred in that long-ago time some of its details are doubtless open to question and its missing pages quite possibly filled in by matter that is not well attested, but there is no reason to doubt its main features. For the obscurity which would make possible the introduction of fictitious incidents attended only the first part of the horse's career; later, as the most noted horse of his period, his place in the annals of the English race-horse is, of course, a matter of record.

This celebrated horse, whose original name was Scham, was one of several choice animals who were sent as a present to the King of France by the Bey of Tunis. Each, as the proper accompaniment of so princely a gift, had an attendant Moorish slave as groom. Scham's groom, Agba, seems to have been a man thoroughly versed in the horsemanship of his country and fully aware of the great value of his



of Rogers' grooms he grew irritable and vicious, and soon Rogers himself could do nothing with him.

Agba now applied a second time for employment, doubtless with the "I told you so" that is always so exasperating to the man who is wrong. Rogers not only refused to hire him, but forbade him the premises. But he continued to hang around the stable, visiting the horse when he could, and, to put a stop to this, he was arrested a few nights later when scaling the stable wall with some carrots in his pocket that he had brought for Scham, and put into the county jail on a charge of attempted burglary.

News of this occurrence reached Lord Godolphin, who lived in the near neighborhood and had already heard from the Quaker the story of the horse and the Moor's remarkable devotion to him. He procured Agba's release, took him into his own employ and bought the horse of Rogers, who was exceedingly glad to get rid of him. Scham, with Agba in charge, was now sent to the Godolphin breeding stables. Agba was overjoyed; the horse was now again owned by a great sheik. But if the Moor thought, as he doubtless did, that the horse's real value was now recognized, he was soon to learn his error, for Godolphin only regarded Scham as an interesting specimen of the oriental stock, in no wise comparable to the English-bred horses that formed his stud, and had no thought of using him as a sire. The "head of the stud"—the horse who held the place of honor in the stable—was an English-bred stallion named Hobgoblin, and to him the best mares were bred. But Agba had nevertheless determined that, by hook or by crook, Scham should have a chance to show his value as a sire.

There was a mare in the stables, named Roxana, whom it had been arranged to breed to Hobgoblin. She was a daughter of Flying Childers and so a descendant, on one side, of the Darley Arabian, and was considered one of the best mares in the stables.

On the day that she was to be bred to Hobgoblin one of the grooms stood holding her near the center of the stable-yard while, from a gate at the farther end, the head groom entered, leading Hobgoblin. A surprise was in store for the head groom. As he passed the inclosure where Scham was kept, its door was suddenly thrown wide open and Scham, with a shrill neigh, rushed out. Owing partly to his past record and partly to stories told by Agba, Scham was greatly feared in the stables, and when he came thus loose into the yard, both grooms deserted their horses and fled. Hobgoblin, however, was more brave; he at once challenged the intruder and in a moment the fight was on.

Not to go into the details of the encounter, it is sufficient to say that Scham, although much smaller, thrashed the big stallion, thrashed him thoroughly and well, thrashed him till he fled the yard, leaving Roxana, who, meanwhile, had been standing quietly by,

quite as if awaiting the result of the combat. And if Scham did not realize at first the full extent of his victory, we may be sure that Agba did. For the horse had triumphed both in love and war.

Word of what had taken place was sent to Lord Godolphin, but it was too late, as Roxana was now in foal to Scham. In due season she produced a colt who was named Lath. Lord Godolphin's views now began to change, for, as Lath grew and developed, he proved much superior to any of the get of Hobgoblin; and when, as a two-year-old, he easily beat them all, as well as several other of the best youngsters in England, the value of his sire was established.

The Godolphin Arabian, as Scham was called, now became the most famous sire in England—not, perhaps, that he was really better than the Arabian sires who preceded him (though of this we cannot judge) but that horsemen now knew, for the first time, what Arabian blood really stood for. The sons and daughters of Arabian sires had always proved superior ani-

blood has had an important part in the development of all our best types and breeds of roadsters. In all breeds thus formed the thoroughbred strain—whether late or remote—is unmistakable; most interesting of all, perhaps, is the part it has played in the development of the American trotter.

Any one who will take the trouble to study carefully the pedigrees of our early trotters will be struck by the frequency with which thoroughbred crosses appear. Again and again they recur. And yet the history of the trotter was, in some respects, like that of the thoroughbred; men did not seem to grasp the true significance of this fact, and it was not till Leland Stanford bought Electioneer and bred him to strictly thoroughbred mares that the full value of thorough blood in developing the American trotter as a breed was clearly recognized. Ever since then its effect has been increasingly apparent, and if there were some cold-blooded trotters in the old days, the trotter of the present is a clean and blood-like animal, as game in every way as the thoroughbred of whose blood he so largely partakes.

In thus showing the way in which Arabian blood has come down to our finest modern horses I must not be understood as implying that its further use would therefore work further improvement. For every distinct breed has its distinct and special purpose. And in all well-established breeds—the test of which always is that they shall reproduce themselves unaltered when bred, like sire to like dam—the time for outcrossing has ceased and they are best improved within their own lines. The most striking instance of this is furnished by the thoroughbred. For, although evolved from the Arabian, he is now, as we have stated, a faster horse; and no one could say that (unless lacking in endurance or some other essential quality, which he surely is not) he could be improved by crossing with anything that is slower.

If a further improvement of the thoroughbred is possible, it must come—as improvement must come in the case of every one of our well-established animal types—not by new crossings, but by the judicious breeding that aims to develop and accentuate the virtues the breed has now.

This article is the second of Mr. Buffum's series on horses and horsemanship. The next will take up the discussion of "Vices and Their Cure." A succeeding article will be devoted to the vice of shying. These articles will be illustrated with diagrams and photographs showing the most humane and effective methods of handling horses in training and breaking—methods used by Mr. Buffum in his own experience. The completed series will give a well-rounded idea of the best practices in horse handling, feeding and breeding, as well as a history of equine development told, we think, with greater charm than it has ever been told before.

EDITOR.

## Turf Music

I've listened to the harmonies of massed orchestral bands,  
And been charmed by operatic stars of this and other lands.  
But as for me all other sounds the subtle essence lack,  
Of the grand crescendo music that comes rolling down the track,  
When, nerves a-strain and flanks a-drip and nostrils breathing fire,  
A well-bunched field of thoroughbreds comes thundering to the wire.  
—Tommy Dod in *Horseman*.

mals; but breeders knew now that this was not because the imported sires happened, by chance, to be good horses and prepotent getters, but because they were Arabian. Breeders of racing-stock now bred back to the Arabian strain again and again, till there was practically no other blood in their stock. And thus originated the word "thoroughbred," so often misunderstood and misapplied. For thoroughbred means: Bred thoroughly to the parent or original stock.

Time, the skill of man and a climate generous of oats and grass have since greatly modified the thoroughbred horse. He is faster now than his Arabian progenitor, and he is larger and does not resemble him very closely in conformation. He presents, in fact, all the characteristics of a distinct and pure type. But he has the same blood-like and aristocratic look, the same clean limbs and head, fine skin and points of excellence. And, as the most ancient type of our modern horses, he is prepotent above all others.

Among American horses, the thoroughbred is the only one that was developed directly from the Arabian. But indirectly, through thoroughbred crosses, Arabian

# Making Home Grounds Delight the Eye

Some Fundamentals of Good Planting—By Prof. L. H. Bailey

The successful beautification of home grounds does not require an artistic temperament nor a college course in landscape gardening. It does demand forethought and the observation of a few principles of arrangement. In our last issue Mr. Farrington showed "How Good Planting Pays." In this article Prof. Bailey, the leader of American horticulturists, gives us an outline idea of the things that must be considered in going about it. EDITOR.

THE general principles of laying out grounds in suburban and country places, with various minor modifications, will apply very well to the grounds of the farmer. Each place must be a law unto itself. It must conform to the general character of the landscape and be adapted to the climate in which it is, and it must also be of such character that it will please the owner.

With those persons who have paid but little attention to matters of landscape-gardening art it is usually necessary to begin with a discussion of plants themselves in order to awaken their interest. Any one can appreciate a plant if his attention is once called to it. Having developed an appreciation for plant form and for foliage, it is but another step to ask where these plants may best be grown.

What is a good plant? The question is difficult to answer, because it depends to a large extent on the person who is to be satisfied. What is a good plant to one may be a very poor plant to another. To those who are not trained in plant-growing, a good plant usually means one that has an abundance of bloom. To the plant-lover and the naturalist, however, a good plant is one that is characteristic and is well grown. The matter of bloom is quite incidental. The plant that is characteristic is one that has individuality. It stands out as distinct from all its neighbors. It has a character of its own. It is, therefore, interesting as an individual or as a single object.

The most important element in the character of a plant is its general form and make-up. As Americans, we have given little attention to mere plant form. We are likely to be intoxicated with color. In some cases we like the form of a plant because it is regular, full and symmetrical. In other cases we like it for

the very opposite reasons, because it is irregular, broken and picturesque. No two plants, even of the same kind, are actually alike, and plants of different kinds are widely dissimilar. Each one of these forms has an individual and intellectual interest to the beholder. It follows, therefore, that, within ordinary bounds, the greater the number of unlike individuals, the greater is the interest in our place. It does not follow, however, that each of these individuals should be planted in the center of the lawn by itself. The individuality of a tree or bush may be shown to quite as good advantage when it is planted somewhere near

effect. Whether red or white or yellow, there should be a general feeling of color from early spring until fall. Ordinarily the color effects are most pronounced in May and June. In recent years great attention has been paid to the introduction of plants that bloom late in the season, and we are now able to carry much of the early color interest throughout the entire growing season. In America we are exceedingly fortunate in being able to carry this color effect to the very approach of winter by the use of asters and goldenrods and other wild plants which make our autumn gorgeous.

Another element in the individuality of the plant is its expression of robustness and vigor. In cultivated grounds we naturally like those things which seem to be thrifty and prosperous. We like plants that are healthy and that seem to be enjoying themselves. Such plants are particularly emphatic if they are incidentals to a general mass of border planting. If, for example, the border mass is somewhat uniform and tame, it is well to drop a seed of sunflower here and there, giving the plants a little extra care in fertilizer and water.

The value of any plant depends, to a large extent, on the place in which it is. I have already discouraged the too common practice of scattering plants over the lawn. It is better to leave the center of the place somewhat open and to emphasize the planting along the sides. It is well to relieve the barrenness and angularity of the house foundation by a mass of foliage against the corners and about the angles.

So far as possible, give the place a free and easy effect by the avoidance of strong artificial features, by grading the banks to gentle slopes and by having everything appear natural, comfortable and convenient. Study a few good pictures of places that have received good treatment at the hands of a landscape gardener and pick out the points of excellence in the different plants. Then look at each tree or bush you pass. Soon these plants will have new interest and meaning. Then consider how you could place them in your yard so that their beauties could be shown and they could be at the same time a part of a cozy landscape picture. You then have, at least, the starting-point of landscape gardening.



Suiting the Planting to the Place—Trees and Shrubbery in Masses Bordering the Large Lawn, Closer Planting of Smaller Specimens for the Limited Lot



the border mass or shrubbery, and it may then also contribute its part to the general effect of the place.

Perhaps the second element in the character of any plant is its foliage effect, whether light or dark, and whether the greens are bright and lively or dull and heavy. The expression of the plant also depends, to a large extent, on the shape and size and number of the individual leaves. It is the mark of a refined and cultured taste that one derives pleasure from all the minor variations in the green of foliage. No two species are quite alike in their cast of green. Foliage composed of many kinds of plants will have as many shades of green as there are kinds of plants, and the light and play of a single color may be of itself quite sufficient excuse for the planting of the mass.

Another element contributing to the individuality of plants is that of bloom. We ordinarily associate bloom with color, but the value of bloom is to be associated quite as much with season as with mere color



# Trees—They Work All the Time

## A Slow Crop That is Worth While Waiting For—By Marion G. Rambo

UNTIL recent years the farmer never thought of the growing of timber trees as a department of agriculture. He planted trees for ornament or to serve as wind-breaks, with little thought of their further utility. Only a very little space was given to them upon the farm, and the ground so occupied was looked upon as non-productive. The average farm-owner feels that he must utilize every possible foot of his land in the production of the annual crops, and that all the space which cannot be devoted to such ends is practically valueless.

But a change in this respect is taking place in the minds of the agriculturists of the country. The rapid depletion of our native forests by the ruthless and exceedingly prodigal lumbermen, and the consequent enhancement in the prices of all kinds of lumber, are causing the owners of farm forests to consider them in a new light and to begin to realize that the growing of timber trees may, after all, be a field of agriculture not to be despised.

Our characteristic American haste to gain a competency, not to say wealth, has affected us here, also. It has led us to devote our efforts to obtaining the quickest possible returns from our property. This has occasioned not only the wasteful destruction of the splendid aboriginal forests with which a generous Nature blessed our land, but it has also caused us to neglect all proper efforts to replenish the supply which we have so lavishly wasted.

It requires only a few short months to plant, cultivate, harvest and market a crop of grain; it takes many years of waiting to get returns from a cultivated forest. We love to handle the cash, and the quickest cash, to us, is the best cash. We lash ourselves and our resources to the jump up to the very limit, leaving it for some other generation to acquire the beautiful and also remunerative grace of patiently waiting a while.

Agriculturally, as in various other ways, we are too little disposed to be bothered with the welfare of subsequent times. We have learned the knack of reducing the distance between the labor and the reward to the lowest limit. Wise as is our day, and cash crafty as we are, we have foolishly forgotten that the speedy reward is seldom either the richest or the most satisfactory.

In the early part of the last century a certain English nobleman came into the possession of a large landed estate. It was utterly impoverished and ruined—merely a wide area of worthless land as viewed from any ordinary agricultural standpoint. It was practically impossible that it could be tenanted and cultivated so as to bring him any income. He took a long look ahead, and determined to forestall the estate. The task was a big one, but he kept at it year after year as his means would afford. All the money he could get hold of he put into the planting of trees and the proper care of them. Before he was yet an old man he began to get returns. Carefully selecting the marketable timber as it matured and planting young trees in the place of those removed for sale, he received a rich annual income for a good many years before his death, and that estate of timber trees is to-day the principal source of revenue for one of the very wealthy families of the "tight little island."

Some of the groves planted by the early settlers in the prairie states thirty or forty years ago, with little or no thought of their ever coming into commercial value, have grown into timber that in many cases makes the ground it occupies the most valuable upon the farms to which they belong. One man in Woodbury County, Iowa, planted ten acres to cottonwood trees thirty-five years ago. The land was cheap, costing him less than ten dollars an acre, and his only idea in planting the grove was to provide a good wind-break for his buildings and to add to the appearance of the farm, which was bare prairie. A year ago the largest trees in the grove were cut and sawed into lumber, the sale of which netted over three thousand dollars, or three hundred dollars to the acre, and the grove was by no means destroyed, only wholesomely thinned out. The average annual returns from Iowa farm lands during the period of the growth of that timber have been less than five dollars an acre, so that it will be seen that no cultivation of the land to the annual crops could have produced as much cash as the trees.

Much of the planted groves throughout the West were thus started by the early settlers for wind-break purposes and were given considerable space because the land was cheap. These groves, having grown into handsome trees, constitute one of the greatest attractions of the mid-Western landscape. But, as the land has risen in price and the entire tillable area has been put under the plow, the farmers have been more and more indisposed to devote the soil to such purposes. As a result few groves have been established by the younger generation of

farmers, and to-day it is a rare thing to see a grove of young trees. There is undoubtedly need for a campaign of education to arouse our farmers to the advantage of tree-planting upon a much larger scale than has ever been attempted in this country.

The great railroads, always on the alert to provide for future emergencies, are becoming interested in the subject of tree-planting. For a good many years they have been feeling the growing stringency in the supply of timber for ties, telegraph-poles and other purposes, and they are planning to avoid it in the future. During the past three years the Pennsylvania Railroad alone has planted more than three million four hundred thousand trees.

It would certainly be the part of wisdom for the farmer to provide for his future needs in the way of fence-posts and other such timber in the same way. This sort of timber has risen greatly in price within the past few years, and there is little question but that it will continue to do so. The cement post, which a little while ago was thought to have great promise, has not proven popular for various reasons, and it cannot be expected to take the place

without thought of their future value in money. An early settler in southern Iowa planted many evergreens in improving his newly-opened farm. He was from somewhere in Pennsylvania, where native pine and cedar forests are common. It was more in honor of his old surroundings than for any other reason that he put out such trees. After many years have gone by, he now finds them in good demand for Christmas trees and holiday decorations. Now he is extending his evergreen grove a little each year and expects considerable regular revenue from this source.

There is a large variety of trees which may be grown with profit by the farmers of the middle West. Of course the returns would be slow to come in, but they would be large enough in the end to prove a good investment. Besides, there is in all sections of the country a good deal of untillable land which is unproductive and of low value as now handled. It could in the most of cases be turned to profit if planted to such forest trees as are adapted to the region.

Among the trees to be mentioned in this connection is the well-known cottonwood, a member of the poplar family, but having a coarser fiber than the poplars of the South. It is indigenous to the prairie sections of the United States, and its towering form with its lofty branches and shimmering foliage is familiar throughout the middle West. It is a rapid grower, trees of thirty-five to forty years old measuring from three to five feet in diameter several feet above the ground. Until recent years this tree was seldom sawed into lumber, but it has been found to make very good dimension stuff for barns and other farm-buildings, and is now being quite extensively used for that. It has also given good satisfaction as frame stuff for residences, and will probably be used more and more for that purpose. There is no more thrifty tree for planting upon the farm anywhere. Wherever it is given a little special care for a few years after planting it grows luxuriantly even in the arid and semi-arid regions. It is peculiarly the tree for the "dry farmer," and may be used by him in transforming his somewhat dreary acres into a more homelike appearance.

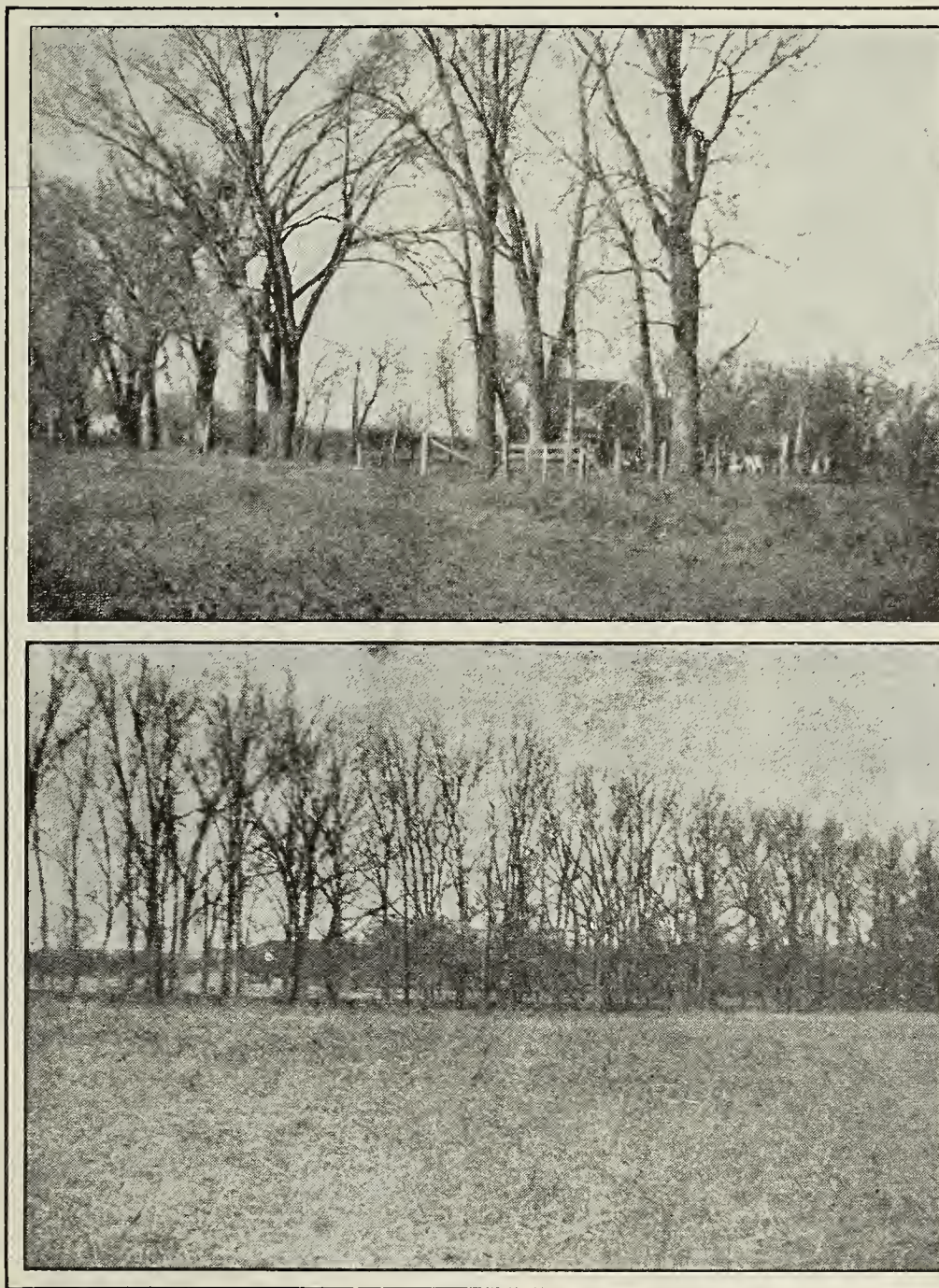
The catalpa speciosa is coming to be recognized as a valuable farm tree throughout all but the northernmost prairie states. It is easily started. The trees may be had from the commercial nurseries at very reasonable prices when taken in quantities. When buying from the nurseries one should be careful to deal with known responsible parties, as otherwise the catalpa bignonioides may be foisted upon him, which is a smaller tree, not so valuable for timber and not so hardy in this climate, being a native of the Southern states. The trees may be started in private nurseries. The seeds should be gathered from the trees in the late fall and sown in a well-prepared garden soil in rows three or four feet apart to allow for cultivation. They will germinate and come up the following spring, and should be well cultivated to keep the weeds down and the soil loose. The seedlings will attain a height of from two to three feet the first season and should be thinned so as not to crowd each other. The third spring from planting they may be transplanted into the grove where they are to remain. After the first season from transplanting the trees will need little further care. The young trees do well in any ordinary farm soil. In from twelve to twenty years they will be of proper size for telephone-poles, barn

posts and various other purposes. The catalpa, like the osage, makes one of the most durable fence-posts.

Another valuable tree for the farm is the black walnut. It is of slower growth than the trees above mentioned, but when it has attained a size suitable for cutting for its timber it is of far higher commercial value. A grove of several acres of walnuts would in the course of time prove a little gold-mine for its owner. Furthermore, if the trees are properly cared for after they reach the age of eight or ten years, they come into bearing and the nuts may be made a source of considerable revenue. In fact, some groves are to-day bringing in more from this source than the same acreage would produce if cultivated to the ordinary annual crops. In some regions of specially suitable climate where nut-groves are planted on a large scale as a specialty, as in parts of California and Texas, very large returns are realized, and it is reasonable to suppose that excellent, if not equal, results might be obtained in the middle states.

Another tree of no little value is the white ash. It is not so well known in this section as those already mentioned, but it is worthy of equal consideration. It grows well in this climate and develops rapidly. There is an increasing demand for this timber in the manufacture of vehicles, and for ax and hammer handles, and similar purposes. It is a wood of tough and elastic fiber, and is rapidly finding favor alongside

[CONCLUDED ON PAGE 21]



The Timber Crops of Two Iowa Farms—Below, a Strip of Walnuts Planted as a Partial Wind-Break Twenty Years Ago, Now One of the Owner's Most Valuable Assets—Above, Cottonwoods Thirty-Five Years Old

of the wooden post to any considerable extent for ordinary farm purposes. It is hard to secure good cedar posts, even at a high price, whereas a few years ago they were plentiful and comparatively cheap. It would require only a small amount of space and a little thoughtful planning upon the part of each owner to make every farm entirely self-supporting in this matter.

One farmer in northwestern Missouri several years ago bought a farm which had been somewhat neglected. The osage-hedges upon it had been allowed to grow up untrimmed. The trees had become too large to cut and lay down in the usual way so that the hedges could be trimmed into neat shape. He found that many of the trees were large enough to make very good fence-posts. This gave him an idea and he took out all that were suitable to such use. He then trimmed up the others so as to permit them to grow neatly. He figures that out of the formerly unkempt hedge-rows he will have a supply of growing timber for fence-posts sufficient for the demands of the farm for many years to come, besides some to sell to his neighbors occasionally. The osage-orange tree makes a most durable fence-post, in every way equal to red cedar or black locust. This may be considered as claiming a great deal for it, but actual tests have supplied ample proofs of the truth of the statement.

Here is another illustration of profit in trees planted



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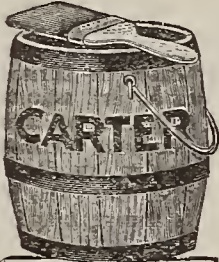
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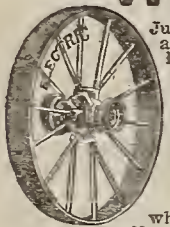
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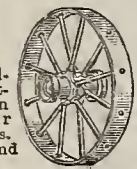
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# Good Water for the Farm—Part I.

## A Place for the Ounce of Prevention—By Vincent J. Youmans, M. D.

The water-supply of the city dweller is watched over by a board of health. Each farmer has to be his own health commissioner. His duty in that regard is one that will not bear neglect. A single case of typhoid fever in the farmer's family may cost him more in dollars and cents than all the precautions suggested in the following article. It may take some one from the fire-side whose loss means more to him than would that of his farm and all his other worldly belongings.

EDITOR.

IT MAY be well before we begin the discussion of the farm water-supply to note the fact that water anywhere is deceptive stuff, whether in the farm well or city reservoir, appearance is no guide to potability—that is, drinkability. In fact, "for ways that are dark" water compares not unfavorably with Mr. Bret Harte's famous Heathen. The records of sanitary criminology abound in murderous waters whose personal appearance was everything that could be desired by the most fastidious. Pellucid, clear, sparkling, of delightful taste, quite odorless, these engaging fluids, upon analysis, have proved to be virulent poisons swarming with disease germs.

The sparkle of well and spring water is largely due to its content of carbon dioxide, the gas with which ordinary soda-water is charged. In the case of a natural water this gas is usually derived from the decay of organic matter. Soils soaked with sewage may, therefore, furnish a water clear, sparkling and, nevertheless, highly dangerous. The action of the ordinary household faucet filter well illustrates the deceptiveness of appearances. It produces a clear, sediment-free supply, but is not only quite useless in rendering contaminated water safe to drink, but may actually serve as an artificial hatchery for germs and further infect the water, instead of purifying it.

Even the so-called Pasteur-Chamberland filter, which when clean does remove the bacteria, cannot be depended upon unless it is scrubbed out every day or two, and thoroughly boiled at least once a week. As Professor Conn, a high authority in the bacteriological field, has clearly demonstrated, in default of such constant care (and, as a matter of fact, it rarely or never is so cared for in a family whatever is done in the laboratory) the water is safer without the use of any filter whatever. In fact, no form of artificial water-filter has been devised that does not require frequent cleaning. The only certain method of rendering polluted water safe to drink is boiling. Even sewage thoroughly boiled would be a safe, if nauseous, beverage—safe, at least, to the extent that it could not transmit infectious disease.

And this is the treatment to which all drinking-water should be subjected, against which any suspicion of pollution exists. That witty individual, who, upon being advised to boil the drinking-water, replied that he would rather drink an aquarium than a cemetery, was a better humorist than he was a bacteriologist. The germ aquarium is a poisonous and lethal thing, the germ cemetery relatively safe and harmless.

Water from the spring, the shallow well, the faucet filter and, under certain conditions of surface contamination, from the deep well, also, which looks, tastes and smells good, may be highly poisonous. "Water drawn from deep wells," says Doctor Bayles, "cool, clear and sparkling," has poisoned many people, and, on the other hand, highly colored, dirty-looking water, such, for instance, as that from the juniper swamps of Virginia, may be quite safe.

The foregoing may seem to the reader an undue amount of fuss over an obvious and unimportant point. Such is far from being the case. The wide-spread existence of this trust in appearances, even in high places and among intelligent people, was well illustrated a year or two ago, when, during a trip to Panama, Mr. Roosevelt confounded the critics of the Colon water-supply by announcing that

he had never tasted a better or more palatable water—the implication being that this was a certificate of wholesomeness. Hence sanitarians feel very strongly on the subject, because the notion that water may be judged by its appearance has killed and is still killing so many persons every year. Here is a sample of what they say, from the volume by Ellen H. Richards and A. G. Woodman, on "Air, Water and Food," which should be of special interest to the farmer:

"Pioneer settlers dug the well as near the kitchen door or the barn-yard as they could find water, with a blind



faith in the protecting power of Mother Earth. . . . So persistent is this confidence in Nature that in the light of this day a majority of intelligent people even will quaff at a wayside well or drink freely at a country hotel or go to live in a city without even taking thought for the quality of the water. . . . Water is water, and he who pauses with his glass half-way and asks whence comes the supply is scouted as a weak-minded crank."

A few of the possible pollutions of the farm well are illustrated by the accompanying sketches. Nowhere, probably, is there a well so situated as to be subjected to all these sources of filth, but there are many—thousands of them—subject to infection from one or several. Suppose the man taking a bracing wash in the delightfully cool well-water has some infectious disease of eyes or skin or lungs! It is plain enough that he will, literally, have washed his sores in the pitcher of water on the supper-table. The washings, of course, are much diluted, and perhaps ninety-nine of the hundred times no harm is done. But, even so, the hundredth or thousandth chance is worth guarding against, even if the family isn't squeamish about drinking from a common wash-basin. Suppose there is infectious or simply dirty material from any source lying about the well or upon the open platform covering it. The chances are at least even that it will be washed in by the diluted stream of kitchen slops, which flows wellward during every rain-storm, or else be scratched in by the hens.

The well when on low ground and in the neighborhood of manure-piles, hog-pens, outdoor toilets, puddles of kitchen slops, etc., acts as a center for collecting the drainage from these sources, and it makes no discrimination against filthy liquids. The soil, to be sure, at first acts as a filter, especially if it is loam or sand; but in course of time it becomes saturated with filth and then a continuous flow of the latter into the well is maintained. When there are cracks or faults in the ground, connecting cesspool or barnyard with the well, the flow will be much quicker, and filter action altogether eliminated. Especially in limestone regions there is always a possibility of underground fissures and streams, some of great length.

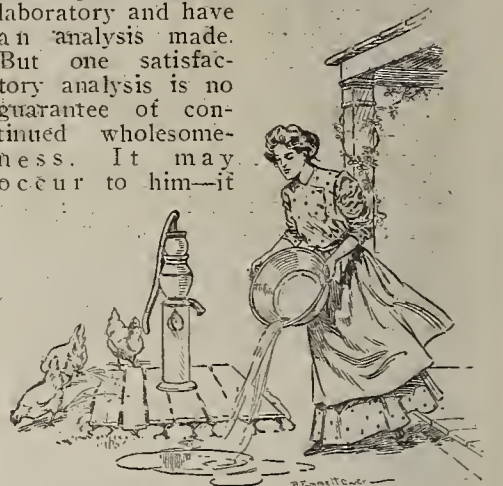
E. H. S. Bailey records the following remarkable case of underground infection: All the people of Lausen, Switzerland, except those occupying a certain row of six houses, obtained their water from a "splendid spring." In a little farm-house on the opposite side of the mountain typhoid fever occurred. The brook running past this farm-house was used as a local sewer. Very soon an outbreak of the same fever was noted in Lausen. The six families who did not

use the spring escaped infection. This put the latter under suspicion. Tests were made for an underground connection between the farm-house brook and the spring (by dissolving large quantities of salt and flour in the brook). It was found that while the passage of the water filtered from it such things as flour, the salt came through, and with it bacteria.

The precautions to be taken are self-evident. The well or spring should be on high ground, higher than any of the possible sources of pollution if possible, and at least not lower than any of them. It should be provided with a tight covering or platform, and the upper several feet of its walls set in cement to prevent the inflow of surface water; it should be far enough away from the nearest filth source to provide an ample intervening space of filtering soil. Twenty-five feet is sometimes given as the minimum distance. One hundred is safer, because of the lessened liability of contamination along the surface of the ground, if for no other reason. Prof. William P. Mason has shown by actual tests that a cesspool on fairly level ground will spread contamination through the soil over an area one hundred feet in diameter.

The usual way of making such a test is to dump into the cesspool or other suspected source of infection, a large amount of common salt or a substance called fluorescein. If these substances are subsequently detected in the well-water the certainty that it is being regularly polluted is manifest. Unfortunately, aside from this crude test there is no simple method of certainly determining the wholesomeness of a water-supply. Water analysis requires extreme care and skill, and can only be satisfactorily performed in a special laboratory.

The farmer who is a skeptic about these new-fangled sanitary notions will perhaps ask to be "shown," before he spends money digging a new well or moving outhouses. He can try the fluorescein test, but a negative result with it is by no means equivalent to a clean bill of health for the water. He can hunt up the nearest laboratory and have an analysis made. But one satisfactory analysis is no guarantee of continued wholesomeness. It may occur to him—if



he is looking for excuses—that, as the water has never caused sickness in his family and has been used by it for, say, twenty years, this is a pretty good proof of its purity. This, unfortunately, is also a fallacy. Until the cesspool which is draining or soaking into the well receives disease germs itself it cannot pass them along to the drinking-water. Let some member of the family or the hired man or a visitor be taken down with typhoid fever. The deadly work of the cesspool will immediately begin and every one drinking the well-water may be infected.

The farmer, therefore, bearing in mind the fact that in the case of sanitation more than anywhere else the ounce of prevention is better than the pound of cure, should take no chances. If his well is not more than fifty feet from cesspool, outdoor toilet or other collection of filth, and on higher ground than any of these, he will dig a new well or move the contamination to that distance, and while about it he had best make the distance a hundred feet.

\* \* \*

Don't worry about opening the gate until you reach it. Somebody may be there to open it for you.

A fence is the dress for the farm's protection, and the posts are the pins with which it is fastened to mother earth.

The farmer feels that there is a certain amount of voice culture in calling hogs, that there is a degree of pleasure in feeding them and a peculiar delight in watching them eat.



# The Newest in Spraying

## Some Predictions Fulfilled—By T. Greiner

### The Dethronement of Bordeaux

WHEN going to attend the several recent meetings of great fruit-growers' associations and the lectures of our expert horticulturists, entomologists, agricultural chemists, etc., I was prepared to note a steady, perhaps marked, progress in the evolution of spraying materials, spraying devices and spraying practices. But I was hardly looking for what, practically, amounts to a revolution in these things. Of course, it tickles a fellow's vanity and self-esteem when he discovers that he has been years in advance of the rest of the practitioners, among them even the noted station experts. It is pleasing to be enabled to say, "I told you so." The columns in earlier volumes of FARM AND FIRESIDE will bear witness as to the stand

with lead arsenate added at the rate of three pounds to fifty gallons of diluted mixture. For melons a still weaker solution was applied. In no case, except once on watermelons, did I find any injury resulting from this spray on the foliage of these crops.

Professor Stewart of the New York State Station asked me why use lime-sulphur in place of Bordeaux on potatoes? He still believes the latter is the best to use for that crop where large areas are to be treated. Possibly it is. I use the other for convenience's sake. It saves me making that disagreeable mixture known as Bordeaux. All I have to do is to measure off one part of the clear lime-sulphur solution, add twenty-five or thirty parts of water and the required quantity of lead arsenate, and I am ready for spraying, without fear of

gallons—use fifty pounds of best stone lime and one hundred pounds of flowers of sulphur. Put ten gallons of water into a seventy-five-gallon iron kettle (jacketed if possible), boil and add the lime. After slaking is well started, add the dry sulphur and mix thoroughly, adding water enough to make a thin paste, say five gallons. After the slaking and mixing is completed, add water to the height of fifty gallons on the measuring-stick, bring to a boil until the sulphury scum practically disappears. Then add water, preferably hot, to the sixty-five-gallon height and boil down again to fifty gallons. Keep well stirred during the entire operation, especially in the earlier stages. The boiling should last about an hour. After that strain into storage or spray tank.

Smaller quantities can be made by holding to the same proportions. If you do not care to make it, any of the guaranteed commercial solutions will give effective service. Always observe the dilutions suited to each type of plant. On exposure to air the concentrated lime-sulphur crystallizes on top and deteriorates, so what is not used immediately should be covered by pouring on a surface film of crude oil or ordinary paraffin-oil about an eighth of an inch thick.

I will venture another prediction. Some of the most progressive growers have rigged up two large iron tanks on a wagon, one to be filled with compressed air, the other with the spray liquid. Connection is made between the two tanks and the spray forced out, first perhaps at a one-hundred-and-fifty or two-hundred-pound pressure, decreasing to seventy-five or one hundred pounds when the last liquid is forced out. I have no doubt that this style of sprayer, in consideration of its manifest advantages (no pumping, no spray liquid being forced through pump and valves), will come more and more into general and deserved use.

### Better Than Paris Green

AN ILLINOIS reader has sent me the following inquiry: "Do you recommend arsenate of lead for use against potato-bugs rather than Paris green, and how should it be used? Where can I obtain a pamphlet or bulletin on that subject?"

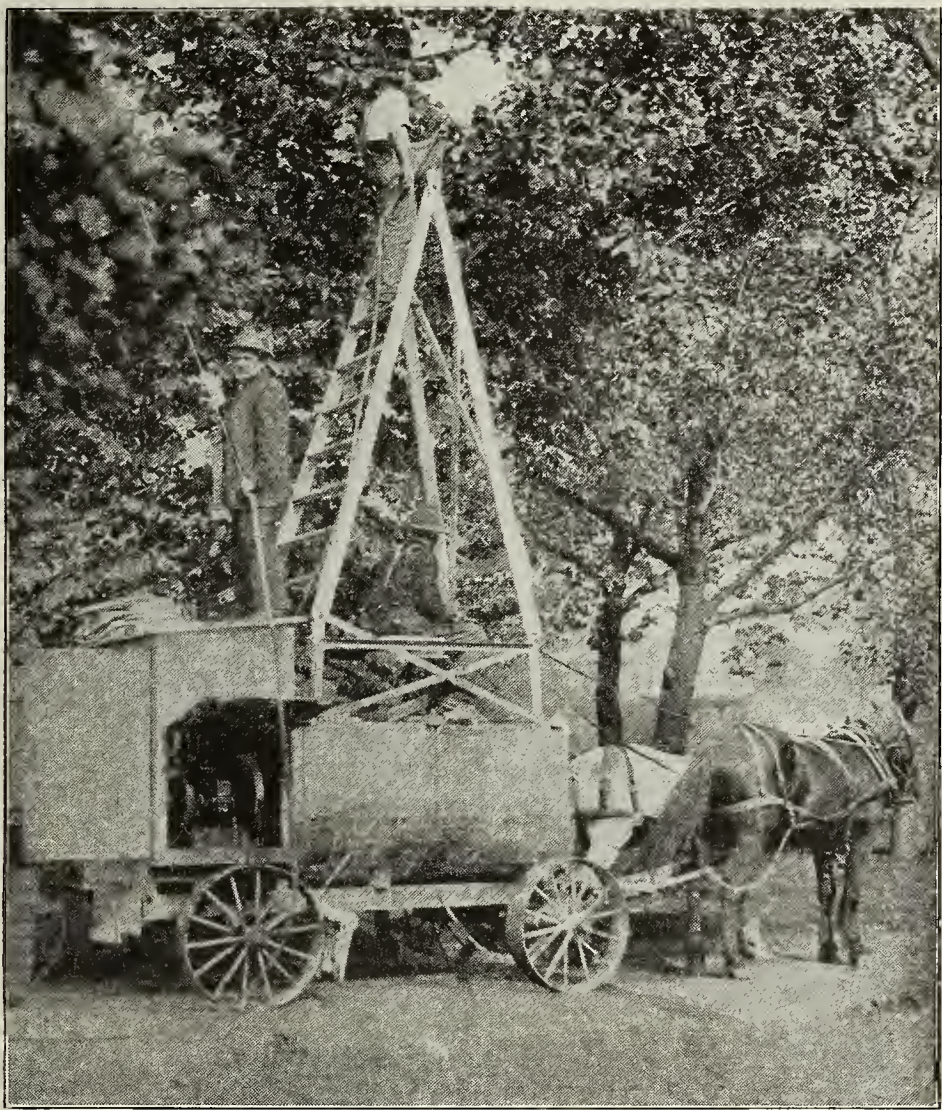
There is a good deal of scattering information about arsenate of lead to be found in various bulletins issued by the experiment stations and the national Department of Agriculture, as well as in books on gardening and fruit-growing. I know of no bulletin, book or pamphlet, however, which treats the subject exclusively or as fully as it deserves.

Paris green has some advantages. Its powder form is convenient, and it is on sale in almost every grocery, drug, hardware, seed or supply store in the land; while arsenate of lead comes in paste form, and is only found on sale here and there, mostly in seed-stores. The paste is sticky; true, but stickiness is itself an advantage. The poison clings tenaciously to the leaf, when once applied, and protects, but never hurts, it. Paris green can be applied dry, even in concentrated form, by means of powder-guns. This feature makes it attractive to many small growers, and even to many farmers in the great potato regions who do not care to go to the trouble of spraying for blight and who just want to kill the bugs at least possible expense and effort, even at the risk of scorching some of the foliage.

Arsenate of lead, in short, must be applied in solution, as a spray. But you can make this solution so strong, without danger to the foliage, that it will kill insects not readily reached by other poisons, especially by Paris green—the rose chafer, the yellow striped cucumber beetle, the flea beetle, etc. For some of these we use four to six and for the rose-bug even up to ten pounds per one hundred gallons of liquid to insure results, and we do not endanger the foliage of the tenderest plant.

Arsenate of lead can be combined with Bordeaux mixture, and for potatoes we usually use this combination, though some of the firms offering arsenate-of-lead paste warn (for some, to me, unknown reason) against combining it with the lime-sulphur wash.

In adding the poison to the Bordeaux mixture or other solution, care must be taken to properly dissolve it. I put a pound or so into a two-quart fruit-can, add water or thin Bordeaux, seal the can and shake it until the arsenate is thoroughly dissolved, then add it to the spray liquid.



Cincinnati is Using Arsenate-of-Lead Spray to Protect Her Large Park Trees From Insects. The Apparatus Shown Was Devised by City Forester A. Leue

I have taken in regard to Bordeaux mixture, the old-style lime-sulphur solution, concentrated commercial solutions, the value of arsenate of lead and the combination of this insecticide with commercial lime-sulphur solutions.

No subject up for discussion during the recent meetings elicited anywhere near the interest that spraying and spray materials did. The professors found themselves almost swamped with requests for information. But Bordeaux mixture is taking a back seat. Paris green is hardly mentioned any more. That nasty compound, the old-fashioned, home-made or self-boiled lime-sulphur mixture, is going out of use. Concentrated lime-sulphur solution, a clear liquid with little sediment if properly made of good lime, takes the place of the earlier materials, even as a summer spray.

Our expert plant pathologists, however, are yet a little timid about making definite recommendations. They simply record the fact that they have used both home-made and commercial solutions, both as winter and, in proper dilution, as summer sprays, with good results, equal to Bordeaux, if not better, on foliage, and safe to combine with arsenate of lead, but they leave it to the individual grower to draw his own conclusions and take his own risks.

Years ago I began making my Bordeaux with soda, in order to get rid of the lime and sediment. Then I discarded this and began using the commercial concentrated lime-sulphur solutions in place of Bordeaux as a summer spray, even on potatoes, melons and other cucurbits, celery, grapes, etc., of course in sufficiently weakened solutions to avoid injury to the foliage. For potatoes the proportions used were one to about thirty,

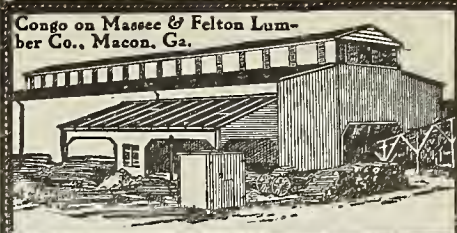
the nozzles of the sprayer clogging with sediment.

I am willing to renew an earlier prediction—we are already approaching the fulfillment of it—namely, that the Bordeaux mixture is to be entirely thrown aside and that we are going to extend the use of the concentrated lime-sulphur solution in its place to all our various crops, potatoes, cucumbers, melons, squashes and celery, as well as on small and large fruits. Of course, it will be necessary for the grower to hold to the proper proportions and dilutions in each particular case and for each particular crop, and some careful experimentation in this line will yet be necessary until we find out just exactly what strength of solution or dilution will be required to kill fungi, yet be safe on the foliage.

Our station experts in this line all unite in urging the use of a hygrometer for testing the strength of the solutions, and this surely is good advice. The commercial, and even the home-made, concentrated solutions vary a good deal, often for inexplicable reasons, and when prepared from the same materials. The only way we can tell the strength of a given solution or dilution is by the hygrometer test. The Pennsylvania station favors the gravity scale or test, the New York station the Beaume scale. Either will do, however, if we understand it properly.

### Home-Made Lime-Sulphur

If any reader desires to make his own concentrated solution, he can easily do so, provided he can get the best of lime. It should be ninety to ninety-five per cent pure, containing but little, if any, magnesia. To make a barrel of concentrated solution—namely, fifty to fifty-five



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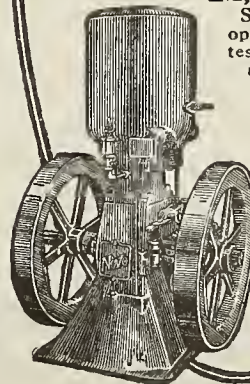
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## Fruit-Growing

By Samuel B. Green

### Grafting-Wax and Peach Budding

A READER in Campton, Illinois, asks about grafting-wax. To serve rightly its purpose of covering wounds, it must not become too soft in summer, so as to melt and run down the stock, or so hard in winter as to crack and split off. A very reliable grafting-wax is made by melting together rosin, four parts, by weight; beeswax, two parts; tallow, one part. When well melted, pour into a pail of cold water, grease the hands slightly and pull the wax until it is about the color of pulled molasses candy. Make into balls and store for use. It should be warmed when applied. If it is too hard, more tallow and less rosin may be used. Some propagators use linseed-oil instead of tallow.

In regard to budding peaches, this differs from grafting from the fact that the buds are inserted under the bark during the growing season. In the South trees are budded in the latter part of May or early in June, and as soon as the buds have grown the trees are cut off above them, and all the strength of the roots forced into this bud, which makes the tree. In the South such trees are big enough to set in permanent orchard rows the same season. In the North, however, it is customary to do this budding in the latter part of summer, and the trees are not cut off until the following spring, when the inserted buds are thus forced into growth, and the whole season given them to make large enough for permanent planting. The purpose of budding, like that of grafting, is to control the kind of fruit the trees bear. If the seedling plants were allowed to grow, the fruit would

be very inferior, while if the trees are budded or grafted, they produce fruit like the tree from which the buds or grafts came.

For more detailed information on budding than our space allows, I would refer you to "Popular Fruit-Growing," Webb Publishing Company, St. Paul, one dollar postpaid.

### Soft Maples for Wind-Breaks

H. F. S. Blue Ash, Ohio—The soft maple makes a quick, rapid growth and is of clean habit and great hardiness. One objection to it is that often the tree is weak in the crotches, liable to break in severe winds, though there is a wide difference in trees in this respect. As to how far this or any other tree should be put from a house to furnish proper wind-protection, it will depend somewhat upon the location. It is not desirable to have trees so close to the buildings as to shade them seriously. Then, too, if the trees are located too close, the snow is likely to drift there and prove a nuisance. My opinion is that no large trees should be planted nearer than fifty feet from dwellings, and that they will furnish sufficient protection at this distance.

If the soft maples show a tendency to break down in the crotches or produce long, awkward branches, a little shortening of the branches will give a good, round-topped head that will not be easily broken down.

### Saving Catalpa-Seed

L. L. K. Trimble, Illinois—Catalpa-seed may be saved any time after the pods ripen in autumn. In fact, the seed often keeps better in the pods on the tree than when stored over winter. In case you gather the pods during the winter, it would be well to let the seed remain in the pods in a cool, dry room until you are ready to use it in the spring. As soon as the ground has warmed up and works easily, sow the seed about one inch apart in rows not less than two feet apart and, better, three feet apart, so as to give room for working between the seedlings the first year. The plants should grow two or more feet the first season and be ready for transplanting to permanent forest plantations at the beginning of the second year; or, if they are to be grown for ornamental trees, they may then be transplanted to nursery rows.

### Sprouting of Locusts

H. E. Lakemont, New York—If your yellow locusts planted for post timber last year are crooked, it will be easy to get sprouts from their roots by cutting them back close to the surface of the ground. If they are not thrifty, I would suggest that the cutting be deferred a year or two, until you get them into good condition, and then the vigorous growth from the stump will make a straight, nice post; while if cut back when weak, the growth will not be the best post timber. Yellow locusts are noted for their sprouting qualities, and you need have no fear of killing them if you cut back while dormant, before any sign of growth appears in the spring.

### Soil for Apple-Orchard

An eastern slope is all right for an apple-orchard in Wisconsin. However, I should be afraid to plant out an orchard on a large scale on land with a sandy or gravelly subsoil, unless the water table was within fifteen feet of the surface. At the experiment station at St. Anthony Park, Minnesota, there is an orchard of five acres that is doing wonderfully well on such soil, but as a general proposition I would not recommend such a location for profitable orcharding. In moist years, such as we have had for a decade, the trees do not suffer on such formations, but dry years they are liable to injury unless the water table is within reach of the roots.

### Sumacs Will Survive

A reader asks whether sumac plants gathered from the woods last autumn, that have had the bark gnawed off by rabbits, will sprout from the roots. Sumac is one of the finest plants about sprouting under such conditions, and if the roots are good, a plentiful supply of sprouts is sure.

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# Gardening

By T. Greiner

## Changing Seed-Potatoes

Now comes the time when we are told, by people pretending to know, that we should "change seed-potatoes;" in other words, throw away our own stock that we have saved for planting and get stock from afar, perhaps paying an extra price for it, besides all the expenses of transportation. If your seed-potatoes are poor, the refuse of the crop, mere rubbish, the advice to "change" is good. It is good in any case for the express companies and the railroads. It is poor for the grower who, by careful selection of seed-potatoes, has maintained or perhaps improved the original vigor and productiveness of the variety.

I examined with considerable interest the exhibits at the "potato show" during farmers' week at the Agricultural College, Cornell University, in February. Among other instructive ones was a lot of mammoth tubers of the Carman tribe, accompanied by the statement that these were of the sixteenth consecutive crop, grown without change of seed, and that they yielded in 1909 at the rate of two hundred and ten bushels per acre. I certainly did not see the first indication of degeneration in the specimens exhibited. They were sound, solid and evidently of strong vitality—and certainly large enough, perhaps one to two pounds apiece. Large size, it must be admitted, was a characteristic feature of the 1909 potato season in all sections of the state.

But why should a grower find it necessary to change seed if vigor and productiveness can be so well preserved? He knows exactly what he has got and that his seed-potatoes are good and (in this particular case) free from blight infection. Shall he run the risk, by sending outside the state, of getting a poorer lot than he has, or a lot infected with disease? The practice of changing, therefore, seems to me to be very good for the poor (careless and unskilled) potato-grower, very good for the transportation companies, but mighty poor for the good potato-grower who carefully selects his seed stock.

## The Old Potato Varieties

In the same potato show I saw the first specimens of Burbank and White Star potatoes that had come before my eyes in many years. And they looked just as inviting to me as ever. It is true that the long shape of the Burbank is not any more popular in the markets of this state, and in many others. But the recollection of the fine quality of these potatoes, especially the Burbank, is vivid enough to tempt me, and I hope I shall be able to get at least a small quantity for planting this spring, so as to be able to try them again baked as of old. The big Freeman potato specimens I saw in that exhibit looked more like Rural New Yorker No. 2 than my old favorite for baking purposes. This sort (for the introduction of which I was personally responsible) may not be as productive as our present standard kinds, but in quality, whether for boiling, steaming or baking, I believe it has never yet been surpassed.

## Just Big Potatoes

The various Carman seedlings, especially Rural New Yorker No. 2, and Carman Nos. 1 and 3 were particularly well represented. This shows plainly that these sorts yet stand in the front rank for market and general purposes here. But evidently some that were marked Rural No. 2 were taken out the Carman bins. The flattish and regular shape, and appearance of the skin, betrayed their origin. There were also several exhibits of tubers of enormous size, a foot long apparently, and weighing three or four pounds apiece labeled "just big potatoes." They were poor, wilted, hollow and absolutely unfit for culinary purposes. Whether we ever will make a business of growing such "just big" potatoes for starch-making or distilling cheap alcohol, as is done in the old country, is a matter of doubt. There may be localities where we might profitably grow them for stock.

## Fertilizers for Potatoes and Tomatoes

A Kansas reader (E. W.) expects to plant a good many potatoes and tomatoes on sandy upland, and would like to know the best kind of fertilizer for these crops. We sometimes can grow pretty good

crops of potatoes without fertilizers, and tomatoes likewise, but the land is kept in good heart by clover rotation, especially if a strong growth of clover is produced by means of applications of manures or fertilizers. For immediate application I would suggest using a complete so-called vegetable or potato manure at such rate per acre as you think you can afford, say from four hundred to eight hundred pounds. Sometimes we scatter a little superphosphate (acid phosphate or dissolved rock) over the rows after the furrows are opened, say four hundred pounds per acre, also perhaps a couple hundred pounds of muriate or sulphate of potash, all in a wide band along the rows, then follow again with the furrower in the same marks in order to mix soil and fertilizers well together before planting.

For the tomatoes a few hundred pounds of superphosphate, applied broadcast, before the plants are set, or even between the plants after they are set, is often all that is necessary. It depends on the condition of the soil, however. A few hundred pounds of a good vegetable or truck manure may considerably increase the yield.

## To Get Early Tomatoes

R. J. S., a Virginia reader, asks me how to get an early crop of tomatoes on strong gravelly soil, what commercial fertilizers to apply and what variety to plant?

Plant a good strain of the Earliana, the early tomato par excellence. But it has no large amount of top, and in a warm climate is liable to give out after bearing and maturing a reasonable amount of fruit. It needs rich soil to stimulate top growth, and some superphosphate to hasten maturity. I suppose the soil is naturally well drained. Any fertilizer suited to garden or truck crops, which has a few per cent of nitrogen, six to twelve phosphoric acid and about eight potash, will do for a tomato crop, and may be applied at the rate of from four hundred to one thousand pounds per acre. Start your plants early and keep them growing short and stocky, and have them in pots or boxes so that they may be set in open ground without checking them. We plant them four to five feet apart each way and give good cultivation.

## Ginseng for Profit

A Wisconsin reader, like many others, has been attracted by stories of ginseng profit. The plant is rather exacting in its demands for soil and other conditions. It is a native of woods and wooded hills, and thrives in soil largely consisting of leaf-mold as found in such locations. It needs partial shade and protection. If you give it the required soil, and plant it under a shed or tent, and learn how to treat it just right, you may, after some years, get some salable roots. But don't lose patience too soon. You will have use for it. If you are bound to try ginseng, study a copy of Kain's book on it (price fifty cents). But don't expect to get rich out of this enterprise in a few years.

## Gambling in Mushrooms

Some more of our readers are tempted by certain claims of advertisers to try mushroom-growing. It is well they should try, if they will not set their expectations too high. Of all garden crops or cellar crops or greenhouse crops I have ever tried, the mushroom is the most elusive. At times I got some. At times I got none where I planted the spawn, and some (usually scattering) where I did not plant them. If everything goes right, you may get mushrooms four weeks after planting the spawn. You are more likely to get none in less than three months, and most likely to get none at all.

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# Garden and Orchard

## Cash From Truck

ABOUT ten years ago the writer took up the development of a small farm, the idea being to devote it mostly to fruit; but while this was being planted and growing up, there were urgent demands by a growing family for a quicker income, as well as some provision to furnish profitable employment at home for the boys and girls. The growing and marketing of truck crops was taken up. Though there were comparative failures at first, we soon learned the demands and possibilities of our market, and the crops that we could most profitably grow.

### Early Cabbage

One of the simplest of these is early cabbage. It is simplest because we do not have to devote much labor to it after the crop is planted, and, as we have been getting it into market before much of any other home-grown cabbage is ready, the selling of it has been an easy matter. We attribute the earliness of the crop to the fact that we use a good strain of Early Jersey Wakefield seed, sown in cold-frames in October and transplanted about three inches apart, keeping the glass on over winter and setting these stout, hardy plants earlier than tender greenhouse plants could be set out. More than that, we manure and fertilize the ground so heavily that they lose no time in growing, and so maggots scarce have time to get in their work; whereas I have often seen them ruin a crop that was a little later.

We heavily manure the ground in the fall, and after a good rain or two, plow and let it remain till spring. As soon as dry enough to work, we sow six hundred to eight hundred pounds of sulphate or muriate of potash to the acre, and thoroughly work the ground. When an ordinary observer would pronounce it ready for planting we plow it, sow four hundred or five hundred pounds or more to the acre of a complete fertilizer, about such as we would use for potatoes, then fit the ground and plant in rows each way two by two feet. After a week or ten days we work in a bit of nitrate of soda around the plants, and the cultivator going frequently both ways does the rest till it is ready to cut. Planting that distance gives about ten thousand plants to the acre, and with a choice strain of seed there are very few heads that are not marketable. Prices usually range from sixty to seventy-five cents per dozen to thirty-five to forty cents per dozen at the latter end of the season, while many are retailed at three to five cents per pound.

### Early Tomatoes

One of the most important of our crops is early tomatoes, and, like cabbage, it is important to have them extra early. A little late, and they are almost sure to come when there are too many for immediate consumption and it is too early for canning, and go at a consequently low price.

For most of our early crop we use a select strain of Earliana. Sow the seed in hothouse in February or early March and transplant. About April 5th we prepare cold-frames and set about fifty to sixty plants to each three by six feet sash, preferring rather clayey soil, moderately rich. With the glass over them and ventilation as needed they should be ready to set out by May 10th to 15th, when we thoroughly soak the bed and with a square shovel cut in blocks, running the shovel under the plant and lifting in large flats with all the soil. In this way they hardly find out that they have been moved, and make a rapid growth, so we generally have some ripe by the middle of July, a very fair record in this northern Ohio region.

A very important thing with tomatoes is to have soil that is in shape to hold moisture well in a dry time and that is yet warm and well enriched with manure. We fit the ground much as we do for cabbage, but use only a complete fertilizer about as for potatoes, not using the potash. We set Earliana about three feet in rows, and rows three and one half feet apart. Other varieties, such as Early Jewell, of which we plant some for a succession, should be set a little farther apart. In setting such large plants, it is best to open a furrow with the plow.

The greater part of the work with the tomato is in the growing of the plants. After they are in the field the cultivator and one or two hoeings between the plants does the work till picking-time.

C. WECKESSER.

## Nuts

HARDLY any feature of farm life is so pleasantly remembered during after years as the excursions on sunny Saturday mornings after the first hard frosts of autumn in search of the crisp chestnuts or the richer walnuts or hickories. The memory of evenings spent in front of the crackling log fire roasting chestnuts and cracking the hard-coated walnuts makes us long for the olden days. With what care the fruit of some trees that were known to produce particularly large and fine-flavored nuts was gathered and stored for the long winter evenings! And now the old tree back of the barn is failing. While we used always to gather at least a bushel of nuts beneath its branches, even the most favorable years yield but a handful as compared with the former bounty. The trunk is rotting at the heart, and some stormy night we will hear a crash and the next morning will find the old chestnut lying prostrate where it had proudly reared its head for so many years. What a shame it is that all the joys that came from the patriarch among trees should be lost with its fall.

Why not be training up successors for the old monarch? Go out some cold day before the buds have started into growth and select scions from the healthiest new growth you can find. Lay them away in a cool place where they will remain dormant till you are ready to graft. Under a layer of sawdust in the ice-house is a good place. Scions, cut the same day, may be used, but they must be secured at precisely the right stage when spring growth is starting, and for convenience and sureness the scions cut earlier and kept dormant are preferable.

Now, some day after the chestnut sprouts have started into growth, take your jack knife, a hard-wood wedge and some string and grafting-wax, and set the scions on promising young shoots. Better set considerably more scions than you expect to have become trees, for hardly all will grow. Not much lost, though, if twenty out of fifty make trees and there is a great deal gained. It is such work as this that makes the farm home attractive and helps solve the problem of farm life.

While you are getting scions, why not use, instead of scions from your old trees, some from the fine new varieties? Among them might be mentioned Ridgely or Paragon. Most of the nurserymen handle them, and it will be well worth while to start a few on your farm.

Many have the idea that nut-trees are very slow in coming into bearing. This is far from the case. When the process is hastened by grafting, in the case of chestnuts the second year sees the production of fruit, while quite a liberal supply is yielded the third year. English walnuts when grafted on ordinary black walnut come into bearing within a very few years, and newly-set trees are productive at as early an age as apples. Pecans are somewhat slower.

Walnuts should be cultivated much more widely than they are at present. For fine rich flavor the common black walnut is unequalled. Exceptionally fine fruit can be produced from scions of selected trees. The idea seems to be prevalent that English walnuts can be successfully grown only in certain favored regions. Either on native stock of black walnut or butternut or on stock of the same variety they do well almost everywhere south of the northernmost tier of states. There is quite a difference in varieties in respect to blossoming-time. Select such as are not so early as to be caught by late spring frosts.

While much can be said as to the commercial value of nuts on land that is not suitable for other lines of agriculture, they are far more important to the mass of farmers in making home life more attractive and the winter evenings more enjoyable.

PAUL WORK.

Professor Hedrick advises against top-working Kieffer with other pears. He has never been pleased with the results. Secretary Gillett, of the New York Fruit-Growers, has, however, grafted Seckels into Kieffers and had good crops.

The New York Central Railroad corporation promises to cooperate with neighboring orchardists for the prevention of the fires started by sparks from locomotives. The railroad will keep its right of way clear of weed growth, if the abutting orchard-owner will plow six or eight furrows alongside of the railroad property.

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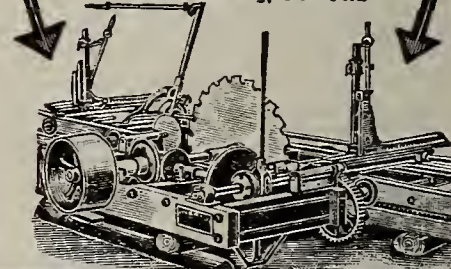


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# Garden and Orchard

## Old Reliables

IN BUYING garden seeds from the catalogues of the seedsmen there is the temptation, especially upon the part of beginners and the inexperienced, to invest too freely in the specialties exploited upon the colored sheets in the front pages. These specialties are generally new introductions and sold at fancy prices.

The introduction of these specialties is, of course, a legitimate branch of the seed business, but it must be taken into consideration that the introducers are prone to be enthusiastic about their new productions, and to paint them in glowing, if not extravagant, terms. Besides, these new varieties are very apt not to be thoroughly fixed in their characteristics, and when removed from the experimental

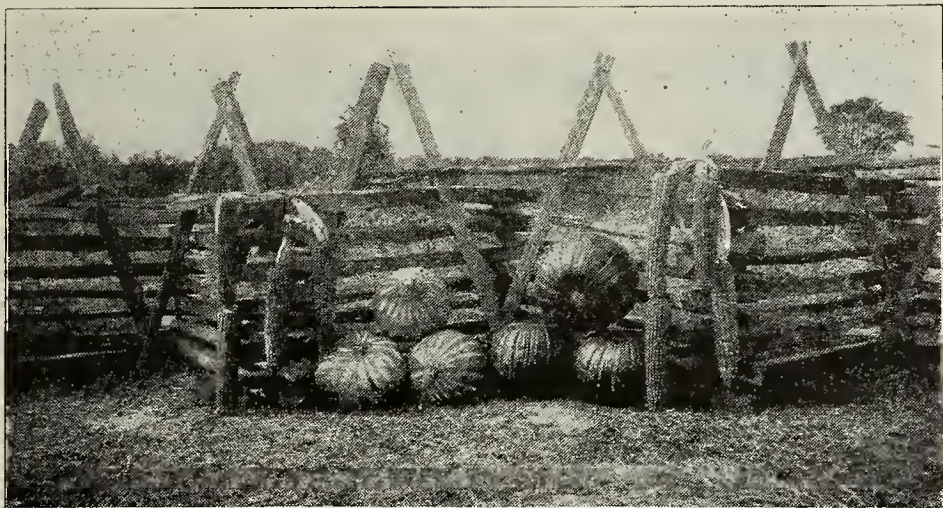
are the best for summer. White Chinese is the finest for fall and for storing for winter use.

Of satisfy I plant only Sandwich Island Mammoth. Of squashes Delicious or Fordhook are good for summer and fall. They are also good winter keepers. The Earliana is the best early tomato. For main crop plant Success or Dwarf Stone. M. G. RAMBO.

## Poor Lime Clogs Nozzles

SOME time ago H. C. G., of Van Wert, Ohio, wrote to me about a common Bordeaux difficulty—getting the liquid strained to secure a free flow without choking the nozzle. "If strained through cloth or fine wire," he says, "I find the process very tedious and difficult."

This problem can be solved by an an-



Startling Vegetables, Aren't They?

We present this picture to show how the camera can be made an accomplice in "nature-faking." The vegetables and the corn are genuine—but the fence, in comparison with which they loom up so finely, was built for the occasion.

farms, where they have been produced, to a different climate and soil, they may prove failures.

There are certain standard varieties of each of the garden vegetables which may be had from almost any seed firm, which have been produced true to name for many years and their qualities constantly improved. These will prove the most satisfactory and profitable for the ordinary kitchen gardener. It will not be out of the way to experiment with the new and highly-advertised specialties, but it is not wisest to depend upon them.

Last year I tried a new variety of bush bean, highly commended in the catalogue. I have no doubt about the general accuracy of its description as grown on the grounds of the seedsmen, but transferred to a new soil and climate, only a few of the plants proved true to character, and several varieties of "sports" were produced, indicating no doubt the original varieties from which it had been produced by crossing.

I mention below a few of the varieties of the several garden vegetables which my experience has proven valuable. The beginner is not apt to be disappointed if he confines his plantings to these:

Of string beans in the bush sorts, any of the Valentines and the Refugee will prove satisfactory. Of the pole sorts, none are better than Old Homestead and Lazy Wife's. The Egyptian strains are the best beans for early use, and Bastian's Half Long Blood for summer and for late planting for winter use. For early cabbage the Jersey Wakefield will give satisfaction, and for late either the Drumhead or the Danish Ballhead. There is no better all-purpose carrot than St. Valery. Early Snowball is a good kind of cauliflower. A self-blanching celery will probably give the best satisfaction in the home garden.

For early sweet corn plant Golden Bantam, and for late Stowell's Evergreen or Country Gentleman. In popcorn there is nothing better than White Rice for the family garden.

Of cucumbers plant Everbearing for pickles and a White Spine for slicing. A good lettuce for cutting is Black-Seeded Simpson, and for heads the Deacon.

In onions I prefer Red Wethersfield or Southport Yellow Globe. The Hollow Crown is the most satisfactory parsnip. Gradus, Thomas Laxton and Nott's Excelsior are good peas for early, and Alderman and Improved Stratagem for late sorts.

Crimson Giant, Vick's Scarlet Globe and French Breakfast are fine radishes of the turnip-shaped sorts. Cincinnati Market and White Icicle are good long sorts. Charters and White Strasburg

swer of three words: "Use 'fat' lime." I find a vast difference in lime, even if freshly burnt. Some samples contain a large proportion of magnesia or of clay or sand. They slake imperfectly and slowly, and when slaked have a large quantity of stony or gritty sediment.

The material you are after in the lime is pure calcium oxide. There is always more or less uncertainty about the purity of any lime, even that from the same kiln varying sometimes. For that reason, too, more lime has to be used than would be necessary if the lime were all of assured "best" quality.

It ought to slake perfectly, turning to a milk or creamy liquid with so little sediment that the straining process is not seriously interfered with. Never use air-slaked lime. Nor is the "new process" lime, even if it should not leave a sediment or gritty substance in the bottom as desirable as lime directly from the kiln. Slake the lime by adding a little water at a time, or just enough so that the lime will neither burn nor become "drowned," and finally make a milk of lime by stirring the whole thoroughly, allowing time enough for any sediment to settle. Then dip the white fluid off to mix with the copper solution—the resulting mixture will be easy to strain through any cloth or wire strainer.

T. GREINER.

## Substitute for Arsenate of Lead

THE Pennsylvania experts favor arsenite of lime in place of arsenate of lead, but chiefly on grounds of greater cheapness. To make arsenite of lime, boil two pounds of white arsenic and two pounds of soda in one and one half gallons of water for ten or fifteen minutes, or until you have a clear solution. Then slake three or four pounds of lime with this solution, and you get a lime-paste—arsenite of lime. T. G.



WALTER A.

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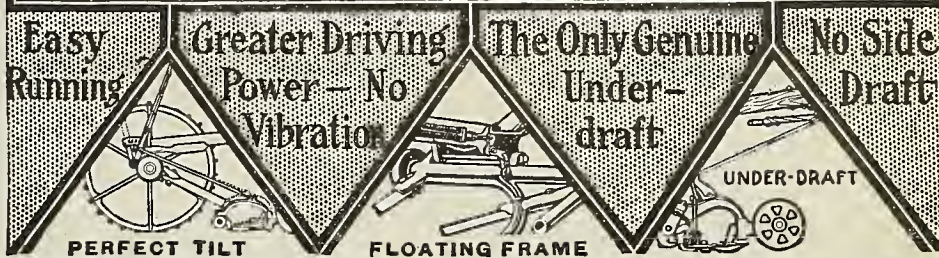
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Don't make the mistake of taking the calf out of the cow's sight, but allow it to be near her so she can see it and lick it. This not only satisfies the cow so that she will give you her full amount of milk, but assists the calf in his growth. If not convenient to put it so close, let it at least be where she can see it.

Now obtain a common quart beer-bottle. Don't put on a nipple, but place the neck of the bottle in the calf's mouth, holding the bottle about as high as the cows' udder. This throws his head and neck more in the natural position and enables him to obtain his rations very much as he was intended to do, thereby assisting digestion. Tip the bottle a little at a time so as not to strangle him. In a little while he will learn to regulate this himself. He usually learns to suck very well the second time.

Rub him gently down the back while he is sucking—this keeps his blood circulating and makes him grow. Use his own mother's milk until he is past three months old, as it is his own age and grows older as he does, while older or younger milk might make him sick. Give eight bottles a day, three in the morning, two at noon and three at night. Allow one of these bottles in the morning and one at night to be whole milk until he is six weeks old. Some might say "that is too expensive! Give him all skim-milk." This is not true. If your cow does not give enough to allow the calf two quarts a day of whole milk and still give you a good profit, better turn cow and calf together and let them go—your cow is not worth keeping.

Run the milk through the separator as soon after milking as is possible, so as to allow him to have as much of the animal heat as can be obtained through skim-milk. If you attempt to warm the milk at all, do so by placing it in a double boiler, but never make the mistake of setting the pan of milk on a hot stove as in this way you cannot keep from scorching some parts of the milk, and soon you have a "scoury" calf and don't know what caused it. I have made it a rule to take the milk immediately from the separator to the calf. Do not at any time give more or less than the eight bottles a day.

Now about the care of the bottle: As soon as you are through feeding wash it two or three times with cold water, then with boiling water. This keeps it sweet and clean. If at any time the calf should become "scoury," clean the bottle by putting in coarse sand or fine gravel in water and shaking it well.

As soon as the calf begins to eat, give him twice a day a pint of crushed corn and cob and a pint of ground oats, increasing this slowly until by the time he is three and a half months old he is eating a half-gallon at a feed. In summer allow him the pasture, and in winter feed clover-hay and corn-fodder with oat-straw if it is clean and bright; I have always raised a better calf in winter, as dry feed agrees with them better than green. Change the dry feed until he has had some of each every day.

Give him plenty of fresh water to

drink, fresh air, but not a draft, and a clean stall with plenty of bedding. As often as you can, give him a rubbing with a brush. When you begin weaning him at about four or five months old, or whatever age you may see fit (but not too soon), taper off by feeding him milk twice a day, then once, and at last not at all, and he will scarcely know what has happened. Never abuse him, but be kind and gentle with him under all circumstances and thereby teach him to love you.

Lastly, there is another thing in favor of the bottle calf over the bucket calf. The bottle calf scarcely ever sucks the cows after it is weaned from the bottle, while the bucket calf keeps in mind all this time that he has been deprived of a good deal of calf indulgence which he often proceeds to make up after he is turned out with the cows. I am now raising a three-quarter Guernsey calf which the boys say they have seen go and lie down in the stall beside his mother without ever attempting to suck her—which could not be said of most bucket calves.

If you follow these directions, I am sure you cannot fail to be more than pleased with the results.

MRS. ANNA R. NALL.

## Madame Cow, Magician

"**A**LL flesh is grass," which being brought down to date means, "no feed, no cow." The feed that produces the cow will make the cow produce, for milk is merely the substance the cow finds in her feed.

It is a wonderful thing the cow does, and not even the professors can tell us how she does it—takes the pasture-grass and water or the dry fodder and grain, and uses such of the elements as she needs for herself, and changes the remainder into the food that babies need.

And, of course, the good cow is essentially feminine—she is going to do her work even to the jeopardy of her own life. If she is well fed, she will give milk generously and keep her own body rounded out with flesh and fat. Limit her feed to a lower amount than her bodily needs require and you will see this generous creature yielding up her own body that she may keep at her ordination of giving milk.

The cow is not a worker in the same sense as the horse or ox, but her work, while more refined, is just as severe. It is very probable that the horse that plows ten or twelve hours daily breaks down no more tissue than the cow that gives thirty pounds of milk in twenty-four hours.

We have learned that the digestibility of a feed is of great importance in animal nutrition. To get a food ready to be taken up by the system requires real work on the part of the masticating and digestive apparatus, work requiring animal energy. A feed low in nutritive elements may require almost as much energy to assimilate it as it contributes when at last it is assimilated. The provender, not only rich in food value, but easily digested, is of most nutritive value productively and contributively. The most ration is rich, well-grown pasture-grass, easily and quickly gathered by the cow.

Obviously, then, things should be made easy for the cow. Effort to her is expense to us. Her feed should be easy for her to procure and easy to digest. Rough usage, noise, excitement, all things that distract her, consume of the energy she has stored up for milk-making. Therefore, the ideal cow life is the quiet, simple life.

These points in cow life are not esthetic, they are plain business propositions, commended to the thoughtful dairyman, the progressive man not too old to learn new tricks.

W. F. McSPARRAN.

## Depleting Her Own Body

**M**RS. R. B. F., Hookstown, Pennsylvania, writes regarding a heifer that has become thin, and that licks and bites the clothes of the milkers. The ration includes fodder and oat-straw, bran, and corn and oats ground. The amounts are given in "measures," not in pounds, so it is hard to tell just how much of each of the feeds is consumed. The trouble does not seem to be lack of salt, which is given twice a week, unless the quantity is deficient.

The ration indicates that likely the cow is not receiving enough protein and, in consequence, being well bred along milk and butter producing lines, she is robbing her body of all of the nitrogenous or protein matter that she possibly can, and, because it is not being given back to her in feed, she is longing for something which will satisfy her appetite. Bran and oats are the only things that supply any of this protein and likely you are not feeding her

enough to furnish her with that which she should have.

Try feeding her some clover or alfalfa hay, or if impossible to supply this, then it would be advantageous to buy some oil-meal, cotton-seed meal or gluten feed and give her about two pounds daily mixed with her other feed.

HUGH G. VAN PELT.

## Feeding for Milk

**A** VIRGINIA reader has a fresh cow that is not milking well and he suspects the ground barley he has been feeding. Ground barley is an excellent feed for milk-cows and there is no reason why it should turn a cow dry. Of course, some other food should be fed along with it, as barley supplies very little protein.

An excellent way to feed the cow at this time of the year would be to give her what roots or silage she will eat, for succulence; all the good clover or alfalfa or cow-pea hay she will care for, to supply dry matter and protein, and then a mixture of finely-ground barley, corn-meal and cotton-seed meal for a grain ration. After the cow freshens she should be placed upon her grain ration gradually, starting with three or four pounds a day and increasing at the rate of one half a pound every other day, weighing the milk to determine whether or not the cow is responding to the feed she is receiving. So long as she responds in a profitable manner it will pay to continue increasing the ration slowly and in this manner bring the cow to her very greatest milk-producing capacity.

H. G. V. P.

## Getting Rid of Cow-Pox

**A** DAIRYMAN writes from Marietta, Ohio: "I have several cows that are constantly being troubled with sores on the teats—blubbers or blisters coming on very suddenly, after which they break down and form a scab."

The trouble seems to be cow-pox. At each milking the udder and teats should be well bathed with a two percent solution of carbolic acid or a solution made of creolin, zenoleum or some such commercial dip. The hands should be washed thoroughly in this disinfectant after milking each cow before starting on another, for in this manner the disease is spread from one to another.

It will be necessary to continue this operation until the trouble has been done away with from the entire herd.

H. G. V. P.

## When You Write to Us

**W**E WANT our subscribers to take full advantage of the services of our experts in the solutions of their farm problems.

In order that the answer may be intelligent and helpful, give all the details bearing on the case.

If you are asking why your cow does not milk well, let us know her age, her breed, the feed she gets (exactly, in pounds if possible), and so on.

We do not pretend to answer veterinary inquiries. In the first place, if the case is acute, you need immediate advice. Even though we give the matter our quickest attention, the animal is likely to be dead or well before the answer comes. Moreover, there are comparatively few diseases that can be accurately diagnosed from a written description, no matter how full. After long experience with veterinary columns, we are convinced that the best advice we can give, with your interests in mind, is: When there is sickness in the barn, call the best veterinarian within reach.

EDITOR.

If it were not so hard for some milkmen to steer clear of the water-pail, honest dairymen might expect better prices for milk.

Yelling at a young horse who is learning only confuses him and gets him excited, and if the load is too heavy, you make a balker and a spoiled horse, right there.

More than one thousand mules were on the market at Columbia, Tennessee, in January. Prices averaged two hundred dollars per head. One pair sold for six hundred dollars.

To know the temperament of each individual animal—its likes and dislikes—is to understand how to feed and handle each one in a more profitable way than is possible where all are treated and fed the same.

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# Live Stock and Dairy

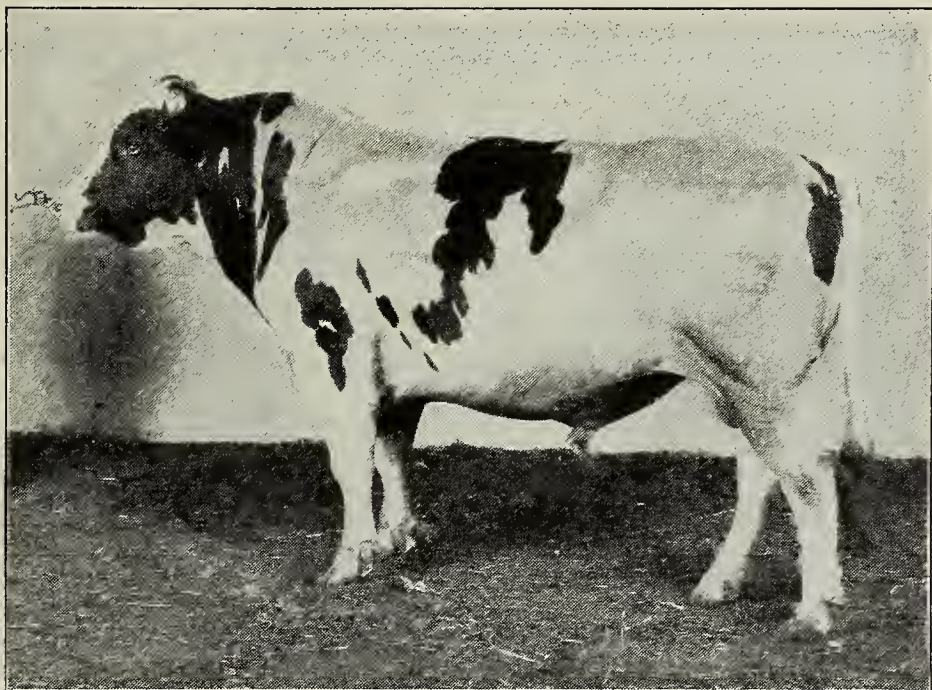
## The Male in Herd Building

**W**E MUST not forget that "the head of the herd" is most important in the work of improvement, representing more than fifty per cent of the breeding power of the herd. Grade cows will continue to stand in the foremost position as producers of dairy products, because of their greater numbers and less cost. There must be a rigid culling out of inferior cows and great care in the selection of bulls to carry on the work of improvement.

It is conceded that the influence of the bull is equal to that of the cow, and his importance is multiplied because he contributes his influence to all the progeny of the herd. In the bull, then, at least half the breeding power of the herd is concentrated. He should be at least as

A good breeding bull should have a masculine appearance. A bull with a light jaw and narrow face and forehead, slim neck and shoulders and fine horns is seldom a prepotent sire. I do not mean that he must be coarse; he should be fine. Coarseness may be defined as unevenness, while fineness is the result of uniformity. Each part should fit smoothly to the part adjoining it.

Do not be tempted by a likely cross-bred calf from your pure-bred bull and one of your mongrel dams. To use him would mean retrogression, for the inherited qualities from the pure-bred sire would soon be lost, aside from the damage of inbreeding. When the time comes that you can no longer use the pure-bred sire to advantage, secure another. First make another close study of your cows and find what variations have taken place



The Prime Factor in Herd Building—His Excellences or Defects Are Multiplied in His Offspring

well bred as any cow so that he may have a right to claim his half or more in the make-up of every calf.

In the pure-bred herd the bull represents fifty per cent of the breeding power of the herd; but when used in grading up a herd of common cows he represents more than fifty per cent, for we must not stop at the first cross, but continue the work of grading up until we bring the herd up to a standard of practical utility equal to that of the pure-breds from which the first cross instituted. In such cases bulls represent practically one hundred per cent in the work of improvement. It seems almost impossible to impress the fact upon the minds of the farmers and dairymen that the only practical and economical manner of improving herds of common cattle is to gradually bring them up to the standard of the pure-bred cattle by the continued use of pure-bred bulls, so that in time the herd will be, for all practical purposes, equal to pure-breds.

By raising the heifer-calves from the best cows and using a pure-bred bull with a milking ancestry we have a reasonable assurance of success in building up a good herd of economical producers. With an inferior chance-bred bull we are sure of failure. We must select a good individual from a family of well-ascertained purity, and a true type of the breed.

Individual merit is if the first consideration, and this should be backed up by a lineage of heavy-milking dams and sires that come from heavy-milking dams. The bull should be symmetrical, not good in one place and weak in another, or the progeny may inherit the weaknesses rather than the good qualities.

Before selecting a sire make a close scrutiny of your best cows, noting very carefully both their weak and their strong points, and resolve in your mind's eye what kind of a bull is needed to overcome the weak points and strengthen the good ones. Thus equipped, visit some of the best breeders of the breed you believe best adapted to your needs and keep going until you find what you want. Do not get stuck on some fine-looking bull-calf that is not just what you want and make a compromise. Perseverance will bring its reward. Look at not only the bulls, but the stock from which they were bred, for your purchase will produce animals like those from which he descended.

If your cows are loose, rangy, overgrown natives or common cattle, select a compact, early-maturing bull. If the cows are small and of proper form, select a rather rangy or large bull of good form.

and what kind of a bull will now carry on your ideas of improvement. Select one from the same breed and, preferably, somewhat the same lines of blood as the discarded one.

By strictly adhering to this rule you will be grading up your herd and not cross-breeding, as many dairymen do. Grading up is gradually bringing the herd up to the standard of pure-bred cattle, while cross-breeding, as it is commonly practiced, may be defined as leaving some well-established road and driving off into the woods.

Good breeding is useless without good care. Keep the bull in vigorous condition without an excess of fat. We have found that a breeding bull will do well when fed about the same kind of food as a cow giving milk and in about the same proportions during the season that he is being used, the amount to be regulated by his condition and the amount of service required of him. We are not, however, in favor of feeding a breeding bull more than one scant feed of corn-silage a day; that particular feed seems unfavorable for breeding animals.

Feed and water him at the same time as the cows and give good shelter and plenty of exercise and fresh air, and it is an easy matter to insure the bull's usefulness for eight or ten years.

W. MILTON KELLY.

## A Chance

**A** LETTER from Mrs. E. L. Gonnen asks for advice about a calf which vomits so badly there is doubt of raising it.

It is very seldom a bovine animal vomits and it is a pretty bad indication. It is not likely that it will be possible to save the calf, as it is a rule that when a cow vomits it is impossible to save her life.

This instance may be an exceptional one and by the continuous use of castor-oil the calf may be saved. A teaspoonful of it should be given twice a day. Skim-milk fed to it should be given in small quantities, in this case about three pounds at a time three times a day and at a temperature of ninety-eight degrees. As soon as the calf gets old enough to eat, it should be given a ration of clover-hay as roughage, and as a concentrated ration a mixture of whole oats, shelled corn, bran and oil-meal mixed in equal parts.

HUGH G. VAN PELT.

The best way to insure the milk-pail against getting knocked over is never to set the pail down. Hang it up if you leave it for even a minute.



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We cannot believe that there is a sensible man living who would purchase any other than a DE LAVAL Cream Separator for his own use if he would but see and try an improved DE LAVAL machine before buying.

It is a fact that 99% of all separator buyers who do see and try a DE LAVAL machine before buying purchase the DE LAVAL and will have no other. The 1% who do not buy the DE LAVAL are those who allow themselves to be influenced by something other than real genuine separator merit.

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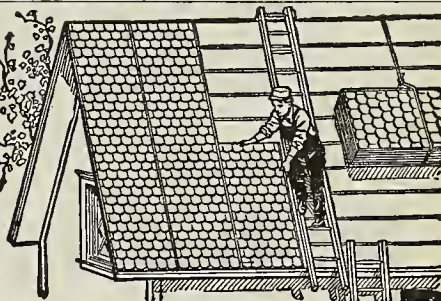
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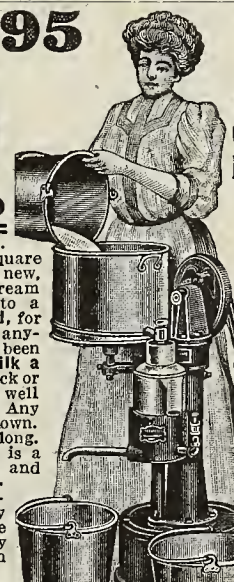
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Steel Shoes solve the problem of the Perfect Work Shoe for all time to come.

The soles of Steel Shoes and an inch above the soles are stamped out of a special light, thin, rust-resisting steel. One piece of seamless steel from toe to heel. As a further protection from wear, and a means of giving a firm foothold, the bottoms are studded with adjustable steel rivets.

The adjustable steel rivets of the 1910 model Steel Shoes add the finishing touch of perfection. Practically all the wear comes on these steel rivets. When steel rivets wear down you can instantly replace them with new rivets. And the rivets at the tip of toe and ball of foot are the only ones that wear. Steel Shoes never go to the Repair Shop, for there's nothing to wear but the rivets. And the Steel Soles shed mud almost as easily as they shed water. The cost is only 30 cents for 50 extra steel rivets. No other repairs are ever needed.

The uppers are made of the very best quality of pliable waterproof leather, and firmly riveted to soles. There is greater strength and longer service and more foot comfort in Steel Shoes than in any other working shoes in existence. It's in the steel and the pliable leather, and the way they are put together.

### Secret of Steel Shoe Elasticity

Steel Shoes have thick, springy, Hair Cushion Insoles, which are easily removable for cleansing and airing. They absorb perspiration and foot odors—absorb the jar and shock when you walk on hard or stony ground. They keep your feet free from callouses, blisters and soreness.

### Low Prices on Steel Shoes

Sizes, 5 to 12. 6 inches, 9 inches, 12 inches and 16 inches high.

Steel Shoes, 6 inches high, \$2.50 a pair; better grade of leather, \$3.00 a pair; extra grade of leather, black or tan color, \$3.50 a pair.

Steel Shoes, 9 inches high, \$4.00 a pair; extra grade of leather, black or tan color, \$5.00 a pair.

Steel Shoes, 12 inches high, \$5.00 a pair; extra grade of leather, black or tan color, \$6.00 a pair.

Steel Shoes, 16 inches high, \$6.00 a pair; extra grade of leather, black or tan color, \$7.00 a pair.

### Throw Away Rubber Boots, Felt Boots and "Arctics!"

Rubber or felt boots heat the feet and make them sweaty and tender. Nothing more uncomfortable or more harmful to the feet. One pair of Steel Shoes will outlast at least three pairs of felt or rubber boots.

A man who wears Steel Shoes doesn't have to own three different styles of working shoes. No arctics or felt boots necessary.

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Wear Steel Shoes and you need not suffer from Colds, Rheumatism, Neuralgia, Lumbago, Stiffness of the joints and other troubles and discomforts caused by cold, wet feet. Keep your feet always warm, dry and comfortable in Steel Shoes. They protect your health and save doctor bills, while adding to your comfort.

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The comfort of Steel Shoes is remarkable. Their economy is simply astounding! Practically all the wear comes on the rivets in the bottoms, and the rivets can be replaced very easily. Don't sweat your feet in rubber boots or torture them in rough, hard, twisted, shapeless leather shoes. Order a pair of Steel Shoes today. Sizes, 5 to 12.

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We strongly recommend the 6-inch high, at \$3.50 a pair, or 9 inches at \$5.00, as they give best satisfaction for general service.

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# Live Stock and Dairy

## Good Care for Pigs and Their Mothers

If sows have already farrowed a litter and have been properly fed and cared for during pregnancy, little trouble may be expected at farrowing-time. With young sows, however, especially those bred before they have fully matured, there is considerable risk, not only to the pigs, but to the sows.

I have the bedding sufficient only for dryness and cleanliness, never furnishing it in large amounts, because the pigs will burrow into it and get lost or be crushed by the sow. I find the best bedding is rye or wheat straw, preferably cut.

The assistance that is imperative at the time of farrowing is to help in case of difficult labor and to keep the little pigs from becoming chilled. I never help the sow if she is getting along nicely alone.

over the top to prevent too rapid radiation and, unless the sow objects too seriously, place the pigs therein as fast as they arrive. The pigs do not suffer if they are not allowed to suck for a few minutes, and they are dry and warm when placed to the teats.

When the sow has finished farrowing I place all the pigs to the teats and see that each one gets its share. As soon as the afterbirth is passed I remove and burn it and then wash the hind quarters of the sow with warm water. I believe the eating of the afterbirth is often the beginning of the habit of eating the young pigs that is so troublesome with a great many sows.

In very cold weather I remove the pigs to a warm place after they have suckled, in order to prevent their chilling. New-born pigs suckle as often as every two hours during the day and it is consider-



Frame for a Three-Pen Farrowing-House

Many pigs are lost every year by lack of attention during farrowing, but, on the other hand, there is no doubt that in many cases over-anxiety and too much attention may do more harm than good. The temperament of the sow should be taken into consideration. Some sows are positively ill-natured and resent interference, while others are plainly annoyed by the presence of an attendant and show it by their nervous actions.

In warm weather the little pigs generally find their way to the teats without aid and are not likely to become chilled. The chance of trouble is made small by furnishing good quarters and proper preliminary feeding to the sow. On the other hand, in extreme cold weather the pigs are in danger of chilling unless the house is heated. When one of my sows farrows in cold weather I place a few hot bricks in the bottom of a basket or barrel, covering them with straw, and put a cloth

able inconvenience to thus handle them, but the time is well spent and often means the difference between profit and loss. The little pigs soon become able to fight their own battle with the cold unaided by any but their own warmth and that of the mother.

During the first twenty-four hours after the sow has farrowed she will need no food. If, however, she shows signs of hunger I give her a thin slop of bran and shorts. I give her tepid water to drink as she wants it. For the first three or four days I keep her on a light ration and do not put her on full feed for a week or ten days, depending on the size and thrift of the litter. Exercise and fresh air are essential to the health of both sow and pigs, but if the weather is cold it may be necessary to let the pigs reach the age of two weeks before turning them out. The sunny side of the barn, sheltered from cold winds, is a good place for their first exercise.

O. F. TAYLOR.

## Shelter at Farrowing

THE price of hogs, now above eight cents per pound locally, would seem to warrant special attention to the saving of every possible pig of the coming crop. A good house at farrowing-time will be half the proposition, especially for the early litters.

The individual house is good, but my plan of building three in one I like better. It costs considerably less than three single houses, saves steps in feeding and is warmer, owing to less outside surface. The size, six by sixteen feet, makes pens five feet four inches by six feet, which I have found will accommodate a large sow.

At the back it is three feet six inches high, in front six feet. Built of matched lumber or even of cheaper boards and covered with roofing-paper or felt it can be made very warm. The side sills—two-by-fours—are laid flat, as is the one in the middle. I lay the sills flat so they will not take as much room off the height inside, as the floor is laid across them.

I put in two doors in front, four feet high, and with an opening above to top of house, fitted with a small window, to slide back. These will give good light for three pens. There are doors between the pens, so that the sow in the middle room can easily be let out or in through either outside door. Three yards can be built with movable fence panels. The building can easily be moved about by two horses.

The accompanying diagram shows the general plan of the frame of the house. The roof need not project in front, the joint being made weather-tight by turning the building-paper over and a little way down the front if it is not used to cover the entire house. If the house is to be moved very often it would be well to use heavier timbers than two by four for the side sills.

One good pig saved by having a good house to be born in will pay for the house and half another one. This house will accommodate quite a bunch of shoats as a shelter, or one of the pens can serve for the head of the herd.

E. J. BROCKWAY.

# MOVING PICTURES

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# Live Stock and Dairy

## A Word to You

NOTHING does the editor so much good as a contribution from some new writer who knows the value of an idea. We have in mind two or three such which we have just received from people who are apparently not in the habit of writing for publication. It has been said that every person has it in him to write one novel. It surely ought to be true that every reader has it in him to write one valuable contribution to a paper like this. Such a letter may be of vastly more benefit to the world than even a good novel. Search yourself for the story which your farm experience equips you to tell better than any one else can tell it, and let us see it, please. EDITOR.

## The Up-to-Date Hog

THE feeding of stock for quality of meat as well as for strong growth has become one of the fine arts. In the past we have too often fed as convenience seemed to suggest; and,

aid enough in making bone and muscle. Wheat-middlings and skim-milk is a proteinaceous combination that pigs not only relish, but that develops them in all parts without excess in any one direction. The grasses and the clovers are of special value to growing pigs; they bulk up the feed in the stomach and are economical adjuncts to the grains.

No one or two kinds of feed will meet all the demands of the animal's system. A palatable variety gives the most economical results, and strengthens and encourages the appetite.

Continuous growth from birth to marketing-time is a requisite in making meat of high quality. To allow a check in growth is expensive, as it requires feed to again fix the thrifty habit; and it injures the quality of the meat. The stunted tree brings gnarly fruit. The same principle holds true with the pigs. Those that are fed with care and liberality and never skip a meal, reach the popular market weights early and at small cost, and produce a class of meat

stable, give him a little roughage to take the edge off his appetite, then give him his grain.

One of the main points to be observed in feeding is that the quality be good. Dusty hay and moldy oats or corn are far more frequent causes of disease than is commonly supposed. Most cases of heaves and many digestive troubles may be traced to this source.

To sum the matter up in a word, success depends more upon the feeder than upon the feed. Careful observation and common sense are the chief factors.

PAUL WORK.

## Double Care at Foaling-Time

AS FOALING-TIME approaches, the brood mare requires more special care and attention than is usually accorded her. The owner seems to forget that there is a constant strain on her entire system; that even her appetite and temperament are undergoing changes, and that these conditions must be judiciously met, in order to insure safety at the foaling-period.

Perfect working order throughout the digestive system stands at the head of the requisites for the best results, and feed, of course, has the most direct influence in maintaining this. Only the very cleanest and brightest of roughage should be given the brood mare. All mold and must, either in grain or hay, should be carefully avoided. Clover or alfalfa is as near an ideal feed for roughage as anything one can obtain. Very little corn should be fed, since its heat-producing qualities are not adapted to the already congested condition of some organs. Any other pure, clean grain, such as oats or wheat, may be fed with good results.

The bowels of the brood mare should be regular and free under penalty of serious trouble with little warning. A quart of bran, fed with grain twice a day, or half that amount of oil-meal or shorts, form a mild laxative and at the same time are peculiarly adapted to the nourishment of the animal. Salt should be kept where the mare will have free access to it at all times. An abundance of pure water must be supplied, and we favor a half-hour before feeding as the proper period for giving it. Regularity as to time, quantity and manner of feeding is also most desirable.

It is a common error to allow the brood mare too much rest and ease. By this it is not meant that she should be worked to excess, but she is in a condition that encourages her to take life too easy. As a consequence, her circulation may become sluggish and her digestive apparatus inactive—conditions almost sure to cause irregularity at foaling-time. She should have gentle exercise every day, jerks, strains and hard pulls being carefully guarded against. In this connection it is also very necessary that the temperament peculiar to the individual mare be studied closely and nothing done that will cause sudden fright or undue exposure. This is not only for the prevention of abortion, but it is becoming well known among up-to-date breeders that any excitement or injury to the mare at this time is certain to be transmitted to the colt, and that a nervous temperament or weakness of constitution will be implanted in the very make-up of the animal.

M. ALBERTUS COVERDELL.

Don't "break" the colts, teach them; and do it early.

If there is anything worse to have on the farm than a balky horse, it is a team of them.

During the January cold spell many hogs froze to death in the South, where the farmers were not prepared for unusual cold weather.

A "Farmers' Club of Chicago" has been organized by wealthy owners of fine stock farms near that city. Attention will be given to marketing pure milk and creamery products. Monthly talks and dinners are included in the program.

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furthermore, our methods have been too frequently guided by rule of thumb, and adopted more because they were the custom than because the reasons for following them were arrived at after careful study of animal physiology and feed-lot results.

It was the custom two generations ago—it prevails in some places to-day—to have sows farrow in the spring and summer, keep the hogs along, half shifting for themselves, until the next spring and then pasture them out for the summer. Toward fall they were given a chance to glean the grain-stubbles and then herded into the pens for fattening. The result of such management was a good frame and not much meat. After such large hogs were fattened, they presented a carcass that might be described as a thin layer of lean covered with a mass of fat outside.

The pork our forefathers thus made met their conditions very well, as they wanted a considerable amount of lard, and their tastes did not distinguish between the hard lean and oily fat of their pork and the juicy meat that can be made while the animal is growing, making both fat and lean at the same time.

To-day, instead of the fat side pork that was the leading article on old-time markets, a different class of meat is in demand. While good hams have been appreciated all along, the demand for bacon has sprung up within a comparatively few years. We are not yet able to supply such bacon as our English cousins ask for, with a large percentage of lean intermingled with the fat; nevertheless, bacon now sells at the highest price on our retail markets of any of the pork meats.

Also, instead of the large, heavy hogs commanding the highest price, as in the seventies, the tender, juicy pig-pork from the lighter-weight hogs is now called for.

The following facts of animal development are coming to determine feeding practice: Bone, muscle and the vital organs are made during the growing period of the animal's life, and cannot be developed to any great extent later. It is nitrogenous feed that makes the bone and muscle. The young animal can utilize a larger proportion of feeds rich in protein than the mature animal can.

It is easy to see from these facts that a well-balanced ration is especially essential when the pig is young. Corn is the great fattening food, but it does not

throughout the whole body that has the intermingling of fat and lean and the sweet, savory flavor that makes pork palatable and popular among the consumers.

N. A. CLAPP.

## Common-Sense Horse-Feeding

AT THE Pennsylvania State College during this year's regular Farmers' Week, Prof. Carl W. Gay, of the Veterinary School of the University of Pennsylvania, spoke on the care of horses. The points he made are worth as much to farmers everywhere as they were to the audience that heard him.

One of the first principles to be established is regularity. The digestive system of the horse or of any other animal adjusts itself to certain times of feeding and it cannot do its best unless the accustomed hours are observed.

It is no more reasonable to feed a horse when he is hot, tired and sweaty than it is to fill a furnace with coal when the grate is clogged and the drafts are closed. It is bad to water a horse under these conditions, but it is worse to feed him.

It is impossible to lay down definite rules as to the amount to feed a horse. We do not use as much coal in a ten-horse-power boiler as in a twenty, nor do we use as much when we are driving the cream-separator as when cutting ensilage. The principle applies as well to the horse. A very light ration will keep an animal in good condition when he is not working and it is certainly foolish to gorge his system with full feed during his Sunday rest. This point was well illustrated in Philadelphia last Christmas. The holiday fell on Saturday, and on Monday the storm prevented work, making three days of idleness. On Tuesday the going was unusually hard, and the horse ambulances had more than they could do to take care of the animals that were down. They had been fed as usual, their systems were overcharged. After being put to hard work for a short time, the hind quarters were suddenly paralyzed and they went down, victims of azoturia. The cure is a matter of weeks, and injury is likely to be permanent.

Some horses are shy feeders, others are gluttons. Special care must be taken with the former to make the food palatable. It must be eaten with a relish if the animal is to digest it well. The gross feeder, on the other hand, must not be allowed to bolt his meals without proper mastication. When he is brought into the





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# Live Stock and Dairy

## Turning Failure Into Success

**F**IVE years ago the two cows which we kept hardly supplied the milk and butter for a family of five. It was not the fault of the cows, for we were to learn that the blame for that state of affairs rested upon us. Through a very happy combination of circumstances, conditions have changed, and from the story of that change can be drawn a lesson for every man who is failing in an attempt to make cows pay.

At that time our interest in dairying was merely secondary to that which we had in other farm work. For that reason, everything came before the cows. All of our other feeding was finished before we went to their stable. For that reason, and because no one liked them, the cows were fed and milked at very irregular hours.

About that time we decided to sell milk, and to that end we bought three likely-looking Holsteins. Since the trolley-car, on which we shipped the milk, ran on schedule, it became necessary for us to milk at regular hours. That resulted in an increased flow of milk; but it was not long before we began to notice that our milk-checks did not compare with those of our neighbors.

It was that comparison which really interested us in farm dairying. We began to see that with our methods the cows were hardly paying for their feed. Quite naturally, we set out to find out the reasons for our failure. The methods of others were carefully noted. Quite gradually a number of changes were made in the manner in which we cared for our cows.

Formerly, they had been stabled with the horses. They were placed in a stable of their own. We had been careless about the hours for feeding and milking. The schedule of the car-line regulated the latter, while we began to see the wisdom of having a set time for feeding.

Quite as a matter of course, careless mixing of feeds had gone hand in hand with our other neglect. Formerly, the cows had to be content with ear-corn and corn-fodder. But since the exclusive use of corn products gives neither a balanced ration nor a large amount of milk, we were compelled not only to change our methods of feeding, but also to change our feeds.

Now, the five cows get about forty pounds of corn, ground cob and all, as soon as they are milked in the morning. While they are being watered, their managers are filled with nice clean alfalfa-hay. About noon they are given a light feed of corn-fodder. After milking at night, they eat twenty-five pounds of bran, which is in turn followed up by another feed of hay.

Every winter finds us with a shed full of feeding lambs. In feeding grain the self-feeder is used. Corn ground cob and all makes up part of the ration. The lambs reject the larger particles. These are given to the cows. Six hundred lambs left enough of this to furnish grain for all the cows. As the sheep were on feed for fifty days, the saving in grain amounted to several dollars. By the way, these broken corn-cobs, with the small amount of grain left among them, makes the best dairy feed that we have ever used.

The trolley-line's charges are not so much per gallon, but a certain amount for a can holding five gallons, so it does not pay us to ship more than five gallons at a time. Hence, we are compelled to find some way in which to utilize profitably the extra milk. We do not care to make butter. This extra milk is used in fattening calves for veal. This results in almost as much profit as selling the milk and, in addition, saves the bother of milking.

Although we do not feel that our small herd has been placed on the most profitable basis possible, we do feel somewhat satisfied over the results of the work of the past year. Instead of the former loss, our account shows a small profit. Although the cows take more of our time than formerly, we can say that they have not interfered with our regular farm work. Our aim in keeping the cows has been to supply the running expenses of the family. In that we have been successful: beyond that we do not care to go. Hence we will not add to the dairy.

We have found that the blame for our failure was our own. Our most profitable cow is one of the two that did not pay for her feed. We have found that dairying on a small scale does pay. We see that a cow, or dairying in general, should not be condemned until it has been given a fair trial, and that a fair trial will not take one's time from everything else.

Here is the account of the five cows for the past year. In summer the milk sold for eleven cents per gallon; in winter, thirteen cents. For that kept for our own use, I have placed the price at twelve cents. The amount of corn is figured on a basis of forty pounds a day, for one hundred and thirty days; bran at twenty-five pounds a day, for one hundred and thirty days. In the following, no account is taken of service fees, manure and the use of the buildings.

### RECEIPTS

From sale of five calves ..... \$ 57.75  
Actual sale of milk ..... 368.50  
Milk for home use, 147 gal. .... 17.64

Total receipts ..... \$443.89

### EXPENSES

Pasture, 6 mo., \$1.00 per mo. .... \$ 30.00  
Hay, 16 tons, \$8.00 ..... 128.00  
Corn, 5,200 lb., \$1.00 per cwt. .... 52.00  
Bran, 3,250 lb., \$1.30 per cwt. .... 42.25  
Corn-fodder ..... 15.00  
Int. 5 cows at \$60.00, 5 per cent. 15.00

Total expense ..... \$282.25

Profit above expenses ..... \$161.64

CLYDE A. WAUGH.

## Skim-Milk Plus What?

**T**HEORY and experience both go to show that skim-milk ought to be supplemented with some enriching addition, to make it an altogether suitable calf-food. The frequency with which oil-meal is recommended for this is likely to lead to the conclusion that it is the best food for the purpose. In our experience, however, the results obtained from its use were far from satisfactory.

Skimming milk not only removes the butter-fat, but concentrates the protein. The addition of oil-meal, itself a highly-concentrated protein food, increases the protein content of a ration which already contained too much of it to produce the best results as a calf-food. Such a ration is not well balanced and it may well be doubted if a ration of this proportion could be fed to a mature animal for any considerable period without harm; much less then should it be fed to a calf.

The grain food that has given us the best results, and which we use in preference to any other to supplement skim-milk, is shelled corn. Corn is rich in carbohydrates and, therefore, gives better balance to the ration. Shelled corn is the best form for calves, because if ground into meal it is much more likely to produce indigestion, by the reason of its fineness. Unlike cows, calves chew shelled corn well and digest it perfectly. Calves will learn to eat it almost as soon as any other grain food. They may be fed as much as they will clean up without harm. More thrifty, healthy, saucy and contented looking calves we have never seen than those fed on this ration of skimmed milk and shelled corn. They should, of course, be fed roughage and be otherwise well cared for.

We have written this article because humanity, in the eagerness of its pursuit of the up-to-date idea, sometimes neglects, and then forgets, an old one of equal and often of superior value.

RURALITE.

This is good dairy philosophy. Oil-meal is probably the most popular supplement for skim-milk. Calves take to it readily, it has a good effect outside its nutritive value and it serves admirably to replace the fat the separator takes. At the same time, however, it carries more protein than the calf can use, which means waste. This statement by Curtiss, of Iowa, is quoted by Henry in his Feeds and Feeding: "Results at this station indicate that it is . . . poor economy . . . and in the corn-belt states, with their surplus of corn and oats, there is no necessity for the purchase of a high-priced nitrogenous product to be used in supplementing the skim-milk ration." Professor Curtiss produced better and cheaper gains using a mixture of corn-meal and a little flaxseed in place of oil-meal, and better yet with oat-meal.

EDITOR.

If the horses' shoulders begin to get sore, see if sweat and dirt have not been allowed to collect on the collar or sweat-pad. Ascertain if the hames pull evenly on the point of each shoulder. One tug may be shorter than the other, or the point of attachment to the hame may need to be raised or lowered by regulating the hame-strap.



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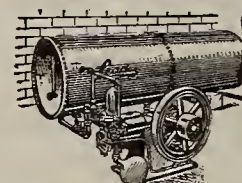
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that make a horse wheeze, Roar, have Thick Wind, or Choke-down, can be removed with

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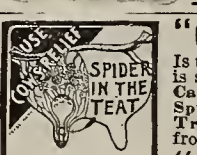
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Coughs, Distemper, Indigestion

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Makes the Horse Strong and Willing to Work.

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Explains fully about the Wind, Throat, Stomach and Blood. Newton's is safe for colt, adult or mare in foal.

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## Poultry-Raising

### Crops That Go With Chickens

Mrs. A. F., Illinois, wants to know what to plant on an acre for chicken-feed. If she wants green food there is nothing that can quite equal rape. It grows like headless cabbage and makes a big lot of good green stuff for fowls and chicks.

If she wants to grow grain, she should plant corn. She will get more feed—that is, grain feed—from an acre of corn than anything else she can put on the land. I have often grown a crop of corn and a flock of chicks on the same land. The corn-field makes an ideal place for them on hot summer days, especially for late-hatched chicks. They were fed all they could eat all the time, with lots of rape or second growth clover, and they did not injure the corn a particle. One season I was short of green feed and my corn-field chicks ate every leaf off the stalks as high as they could reach, and every atom of grass and weeds that came up. Taking the lower leaves did not injure the yield any, but just as the

cultivation of the corn had ceased and insects could not be found so readily, they began to run in a stubble-field from which the wheat had been harvested. Thus these chicks had a variety in food the whole summer and they thrived accordingly. As for water, all they had to do whenever thirsty was to go to the trough where the stock was watered. Generally there was water on the ground where the trough had run over.

Lice or diseases did not carry off any of these chicks. Their mother had been roosting at the barn all spring and probably there were no lice on her at the time the chicks were hatched. And, as they never came in contact with other poultry, they had no chance to contract lice. Their runs were on ground never before used by chicks and so there was no chance of their contracting the gapes—that bane of some chicken-raisers.

Every night they had good, dry quarters. They roosted under the feedway where hatched, and no matter how hard it rained no dampness ever reached them. On hot days when they were in



Sunday Dinners on Foot

grain was hardening a storm came along and laid the stalks like a roller; then I had to get the chicks out in a hurry. The half-acre of corn panned out thirty-eight bushels, and I sold the chicken crop for eighty-four dollars and had the fertilizer where I wanted it.

Mrs. A. F. will find it easier to grow corn and buy such wheat and oats as she needs for feed than to try to grow the small grains. Then she will get the fodder for her cows, which is much better than straw.

We raised White Holland turkeys several years, and saw very little real difference between them and the Bronze variety, except that they were inclined to remain nearer home. They do not grow quite so large as the Bronze, but many think their flesh is more tender. I think that is a matter of feed. If I was a woman hoeing my own row I would not monkey much with turkeys. They require too much attention when young.

FRED GRUNDY.

### A Lesson in Chick-Raising

LAST summer I was much interested in noting the thrift and growth of a brood of chicks that hatched out at the barn. A hen stole her nest under a feedway and in due time brought forth a brood of ten baby chicks. From the time they hatched until they were grown these chicks received no attention whatever from any person; they never received so much as a spoonful of food which either they or their mother did not forage for. Yet they grew and thrived wonderfully, even outstripping in weight chicks considerably older than themselves and upon which a great deal of time was being spent. Eight of them lived to reach maturity; I'm inclined to believe that rats got the other two.

Now I think I know why these chicks did so well, despite the absence of all care. According to my way of looking at it, the conditions under which they grew up were almost ideal, except that there were a few rats around the barn. First, as to food: All summer their principal foraging ground was a large corn-field just back of the barn. At the time of hatching the corn was still being cultivated and naturally insects and worms without end could be had simply for the seeking. Early and late the hen and her chicks were in that corn-field digging for a living. They held undisputed sway of the whole field, since other chickens seldom ventured therein. In addition to this, they picked up a great deal of food around the barn itself in the way of shatterings. As soon as they were large enough to eat corn they found spilled grains from the corn-crib at hand. Then later in the season, when

the corn-field the stalks of corn furnished plenty of shade. They were also protected from any hawks or crows that might be on mischief bent.

I have enumerated but a few of the advantages these chicks enjoyed. If all chicks could be given just as good a chance for their lives as these chicks had by "happenstance," there would be fewer disappointments. A variety of food, which included plenty of animal food, was theirs; they were not overcrowded; they had a clean dry roosting-place every night, and lice and disease were unknown to them. The successful rearing of chicks demands all of these.

W. F. PURDUE.

Gather your eggs often. One broken egg in the nest may get your flock into the bad notion of eating eggs.

## I'll Start You Raising Chickens With This 120-Egg Incubator Freight Prepaid—For \$7.50



J. W. Miller

duction as I arranged it, owing to my scoop on materials, labor and manufacturing facilities. If you are to be one of the 20,000 to get this bargain, write me now. I'll send my big poultry book free—the best published, and my cut prices and freight-paid offer on all sizes of my

### Write For Low Prices On Larger Sizes—Freight Prepaid

I AM quoting lower prices on Ideal Incubators, delivered, this year than I ever thought I could possibly offer you. Yet my Ideals are better this year than ever before. And this is why: They are metal-covered all around, front, back, sides, top and bottom, encased in best grade, 28 gauge galvanized iron. That means that the Ideal is the absolutely safe incubator; also, that it holds the heat as no other incubator can; insures an even temperature and saves oil.

I can sell just 20,000 of the 120-egg size at this price, freight paid. So you had better write me now. The 20,000 will be cleaned out in a few weeks at this startling price. I can't make more at that figure this year. I planned this big scoop on the incubator business months ago. No one else could have arranged the cost of production as I arranged it, owing to my scoop on materials, labor and manufacturing facilities. If you are to be one of the 20,000 to get this bargain, write me now. I'll send my big poultry book free—the best published, and my cut prices and freight-paid offer on all sizes of my

## 1910 IDEAL Incubators and Brooders

Never before have quality hatchers been sold for prices that even approach mine—and remember, I pay the freight. And the machine I'll send will be complete, ready to use; no extras to buy. Years of service have proved the Ideals to be record-breaking hatchers; and the new model, encased in galvanized iron, sets a still higher standard of perfection. Made by experts, of the best materials money can buy; absolutely safe; automatic regulator; guaranteed to hold even temperature during entire hatch; automatic ventilation—the simplest to operate; most durable and best finished.

I ask you to find more value, at any price, if you can.

I am prepared to quote you the only really cut prices of the season. And I'll pay the freight to your depot.



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### Big, Free Book Poultry For Profits

contains my 30 years' experience as a poultryman; over 20 full-page illustrations of Standard-Bred Poultry, all breeds; other fine cuts; all printed on best of paper. Tells what Ideal Incubators and Brooders have done for others and what they are guaranteed to do for you.

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Just say, "Send your Free Book, 'Poultry For Profit,' and your lowest prices on Ideal Incubators and Brooders of all sizes." If you ask me to, I'll put aside one of the 120-egg size machines for you for a few days, at my special price, so you can get all the facts out of the book before you decide.

My freight-paid offer of \$7.50 on this machine is the same to all on shipments to points east of the Missouri River and north of the northern boundary of Tennessee. If you live beyond these lines, write for my lowest price delivered to your R. R. Station. Better write at once, or take down the address now, to remind you. Address J. W. Miller, President,

J. W. MILLER COMPANY, Box 31, FREEPORT, ILLINOIS

### Free and Clear to Your Depot on 30 Days' Trial

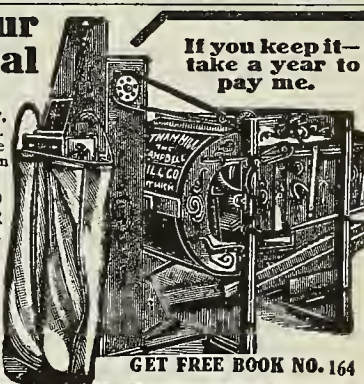
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This big money-maker is yours, for 30 days' use, anyway, no matter where you live, without a penny of expense to you. I'll pay the freight. I don't want any money in advance—any deposit—any contract. All I want is your permission to ship you a

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Then, if you want to keep it, pay me my bedrock, factory price—on easy terms. I think you'll want it for keeps when you know how fast it makes money by giving you clean, graded seed to plant and sell. One means full crops—necessary when land is so high; the other means top prices when you sell. MY FREE BOOK, No. 164, will tell you all about it. Send your name and address now, so I can make you my remarkable offer. Ask for Book No. 164. Use nearest address.

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If you keep it—take a year to pay me.

GET FREE BOOK NO. 164



A penny's worth feeds 30 fowls one day. Sold on a written guarantee.

as "The Dr. Hess Idea," and is endorsed heartily by medical men who know the value of the elements of which Poultry Pan-a-ce-a is composed. It brings young chickens to early maturity; it helps old fowls to fat quick and tender. Pan-a-ce-a also cures Gapes, Cholera, Roup, etc.

1½ lbs. 25c; mail or express 40c; 5 lbs. 60c; 12 lbs. \$1.25; 25 lb. \$2.50.

Except in Canada and extreme West and South.

DR. HESS & CLARK, Ashland, Ohio

Send 2c for Dr. Hess 48-page Poultry Book, free.

### YOU Can Make Poultry Culture Pay

It's not so much a question of any one particular breed, as how you handle the breed you have. If you possess a flock of "blooded" birds—well and good. But if yours are only "barnyard" fowls, don't be discouraged—they will pay you handsomely if you keep them healthy, happy, hearty and prolific by giving a regular daily portion (small) of

## DR. HESS Poultry PAN-A-CE-A

In the soft feed. The effect of this preparation is almost marvelous. It gives the fowl perfect digestion, and that means the maximum nutrition is extracted from grain and "mash" and sent through the blood to make growth and eggs. Dr. Hess Poultry Pan-a-ce-a is a tonic—not a stimulant, not a condiment, not a food. Its one sole purpose is to make food available; and that it does this is the voluntary testimony of thousands of satisfied users who are coining money in the hen business. This method of feeding is known among poultrymen as "The Dr. Hess Idea," and is endorsed heartily by medical men who know the value of the elements of which Poultry Pan-a-ce-a is composed. It brings young chickens to early maturity; it helps old fowls to fat quick and tender. Pan-a-ce-a also cures Gapes, Cholera, Roup, etc.

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If you are a farmer and own farm stock, Dr. Hess Stock Food is a necessity in your business. It's a tonic—acting directly on the digestive organs. A small dose in the grain ration, twice a day, maintains a regular, healthy action of all bodily functions in all animals receiving it. It increases appetite and at the same time gives the digestive organs power to carry the increased load. Thus it makes more milk in the cow; more flesh on the steer; and greater spirit in the horse.

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## INSTANT LOUSE KILLER KILLS LICE



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**INCUBATOR**

It is best to buy this Bonded Incubator because you are absolutely certain to be satisfied with it and with the results it produces.

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are sold on 60 days' Free trial. They are fully guaranteed and the guarantee is not only backed by the total resources of the Sure Hatch Incubator Company, but also by the Bankers' Surety Company of Cleveland, Ohio, with \$1,000,000 capital and surplus. **This Company issues a Guaranty Bond on every Sure Hatch Incubator, insuring the owner that we will live up to our liberal guarantee and this bond is actually sent to every purchaser of a Sure Hatch Incubator.**

Order a Sure Hatch to-day. We pay the freight. Ask for our Free book.

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**EVERY EGG COUNTS**  
at present high prices. It's easy to make your hens lay more eggs by using

**DAVIS POULTRY FOOD TONIC**  
(A Spoon's a Feed)  
Will increase egg production because it insures perfect health and vigor. One extra egg a month will pay for it. You can't afford to do without it. Davis Poultry Food Tonic is sold under a MONEY BACK GUARANTEE.

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Write for Free Book, "The Davis Method." It will tell you how to feed for largest profits. Agents wanted. Send for liberal terms.

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Poultry raising possibilities were ever better. Profitable on small or large scale. Geo. H. Lee knows. He started in a small way. He now has 3000 laying hens. He reared the Mandy Lee incubator, the Mandy Lee Brooder, and all the appliances he could not buy. He experimented with his own money, not customers'. The

### Mandy Lee Incubator

was offered to the poultry public when perfected, not before. Inexperienced can start with Lee's twenty years' successful work. Lee's "Chicken and Brooder catalogue" are ready to mail. Both free. Send for them to-day. There is no poultryman's need omitted from this catalog. It is a complete showing of the things that made Mr. Lee a successful poultry raiser.

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and get this big book on Poultry Raising, free, post-paid. It tells how successful poultrymen feed, breed, rear, hatch and house. Full of valuable hints and helps you'll be pleased to know.

**80 PAGES**  
Practical Poultry Raising Experiences

Secrets of others' success. Plans for Poultry Houses, how to make a first-class brooder out of a piano box. Describes the 1910 Sand Tray Prairie State Incubator Co. 415 Main St., Homer City, Pa.

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And Squabs. Tells how to start in small and grow big. Describes largest pure-bred Poultry Farm in the world and gives a great mass of useful information about poultry. Lowest prices on fowls, eggs, incubators and brooders. Mailed for 4c. F. Foy, Box 10, Des Moines, Iowa.

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All leading varieties pure-bred. Largest Poultry Farm in the world. Fowls, Eggs and Incubators at lowest prices. Seed for big book, "Poultry for Profit." Tells how to raise Poultry and run incubators successfully. Seed 10c for postage.  
**J. W. MILLER CO., Box 208, Freeport, Ill.**

## Poultry-Raising

### A New Preventive for Gapes

**M**ost writers on gapes assert that the worms which do the damage are acquired in something that the chickens pick up. That might be true if what was picked up and eaten went into the windpipe, but every one knows that there is no connection between the crop, into which everything picked up goes, and the windpipe.

So much for the theory. Now for my own observations. I am by nature a close observer and give my fowls that close attention necessary for success in the poultry business. About forty-eight hours before the chick begins to gape I have noticed them scratching frantically, first with one foot and then the other, at their nostrils. So that, I concluded, is the way the gape-worms gain entrance. The tiny worms are moving, or possibly the worm-eggs have found lodgment there and are hatching, which causes irritation. Just how the egg or worm gets into the nostrils I do not know. The worms, as they develop, go down into the windpipe and we have a well-developed case of gapes.

To prevent gapes use the fumes of turpentine. I use barrels for coops and put them under cover at night. I mix turpentine and lard in a cup, take out each hen and apply the mixture to the under part of her body and wings. The use of the turpentine ought not to be begun until the chickens are two weeks old. I go over each hen twice a week until the chicks begin to feather out. I have used that preventive for six years and have not lost a chicken from gapes.

Mrs. J. C. HUNTER.

This preventive is new, simple and appears well worth a trial. Our knowledge of the ways of gape-worms has always been obscure, but this much is certain: They persist year after year in ground once affected. The best complete escape from it is to move poultry house and yard to a new place, and if we cannot manage that, to disinfect the ground by a heavy dressing of slaked lime—this quite aside from the remedies we apply to the individual birds.

EDITOR.

### Yellow Diarrhea

**A**N OREGON subscriber has lost two full-blooded hens bought a year ago, with a disease, the chief symptom of which is yellow droppings "resembling sulphur." Now the rooster has it. Of about fifty chicks from the trio none have been lost with this disease, however.

The fowls probably have what is called yellow diarrhea, caused by germs brought with them from the place where they were bought, inasmuch as no others of the flock are affected. The best treatment for the affected rooster is to obtain from the druggist tablets of mercury bichlorid, each one one thousandth of a grain drug strength. Dissolve twelve of these in each quart of drinking-water, allowing no other drink, or give the affected birds one tablet night and morning. I would advise thorough disinfection of the quarters where the sick birds were kept, with a good disinfectant or whitewash.

A. E. V.

### Scaly Leg

**W**HEN the leg scales stand out roughly, instead of lying neatly and naturally over each other, this disease is to be suspected. It starts at the front of the legs, oftenest, but not always, on the old fowls, and spreads to the whole leg and to other fowls. It is not deadly, except after a long time of development, but a bird badly affected is not good for much if the trouble is allowed to continue.

The cause is a tiny burrowing parasite of the insect tribe. Oily applications have been found effective against it. The standard treatment is to wash the legs with warm soap-suds and an old stiff tooth-brush. In severe cases the loose scales ought to be scraped off first with a brush or chip. Some ointment should then be rubbed well in between the scales. Flowers of sulphur one part and vaseline two parts is a well-known formula; some use melted lard instead of vaseline. I have had good success in light cases with carbolated vaseline.

If one has time to rub the application on the legs of all the fowls, that way is preferable, but many prefer to simply dip them up to the hock. Straight kerosene is often used, but is too severe—it injures the fowl almost as much as the parasite. I recently saw a formula—two parts linseed-oil to one of kerosene—which seems as if it would be milder and do the work equally well. Give several daily applications.

A preliminary to any treatment at all is to remove the affected birds from their companions as soon as the trouble is noticed, for while the parasites spread comparatively slowly, they are insidiously sure.

H. H. GREGG.

A subscriber writes recommending the following with regard to this same disease: "Washing with creosote dip and greasing with black oil every day will cure it. We like that better than using coal-oil. The above is also good for sorehead, together with good and plenty feed and crushed shells so they regain and keep strength."

EDITOR.

### A Cure for Roup

**I**HAVE tried many cures for roup, but the following never fails: Pour down the fowl's throat a teaspoonful of warm (not hot) lard, and give all the corn it will eat. Repeat in three hours if very bad, but I find that one dose always cures.

The cases have got to be caught in the early stages, of course. As soon as I hear the hoarse "hee-haw, hee-haw" in breathing or note the hard swallowing and snorting of mucus, I give the lard. I never let the case get beyond the thin watery discharge from the nostrils and slightly-swelled head. Some cases cured were so bad, though, that the hen was nearly choked by the discharge. With such I repeated the dose.

These cases had not developed the cankers in mouth and throat to any extent; I did not let them get that far. In a case of the most virulent, rotten stages I would not waste time, but go far in the woods with an ax and the hen, then fumigate.

CLIFFORD E. DAVIS.

When you tell folks your eggs are fresh, mean what you say. You will soon have a business that will put the dollars into your pocket.

When you see signs of misshapen eggs, look for something wrong with your layers. Hens that are all right never make a mistake in the form of their eggs.

If you are not proud of your hens, sell them and get some you will be tickled to show folks who call on you. Then you will be on the road to success. Not before.

Set your foot down on everything that tends to scare your birds. Hens that are all the time stirred up in any way do not lay as many eggs as those that are quiet. Queer, but it is so.

Damp floors keep the hens under the weather with coughs and colds. Dry the floors and walls by the use of lamps or stoves of some kind. But look out that you do not place anything in the houses that can be tipped over.



### 125 Egg Incubator and Brooder Both For \$10

Why pay more than our price? If ordered together we send both machines for \$10.00, and pay all the freight charges. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery underneath the egg-tray. Both Incubator and Brooder shipped complete, with thermometers, lamps, egg-timers—all ready to use when you receive them. All machines guaranteed. Incubators are finished in natural colors showing the high grade lumber used—no paint to cover inferior material. If you will compare our machines with others offered at anywhere near our price, we will feel sure of your order. Don't buy until you do this—you'll save money. It pays to investigate the "Wisconsin" before you buy. Send for the free catalog today, or send in your order and save time.

**WISCONSIN INCUBATOR CO., Box 79, Racine, Wis.**



**Wisconsin Incubators** are made of California Redwood. Lamps are galvanized iron. O. K. Burners. Taylor Thermometers.

**This illustration shows the double walls with air space between.**

Wis. Inc. Co. Dear Sirs:—I am well pleased with your incubator. I have been in the poultry business for years and handled all kinds of incubators and there is only one I like as well as yours and that is a high priced machine. My poorest hatch was 123 from 130 eggs; all nice, strong, healthy chicks.  
WILL PHILLIPS, Muskegon, Wis.  
Wis. Inc. Co. Dear Sirs:—Received incubator from you last April and had very good success. From the first hatch got 109 chicks from 115 fertile eggs. From the second hatch, 120 chicks from 124 fertile eggs. Am well pleased with the \$10 machine. Will hatch as many as any high priced machine.  
MRS. HENRY BECKWITH.

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**With What We Have to Offer** A letter or postal—either one will do—then we'll send you our literature and valuable information on raising poultry to make money.

Racine Incubators turn healthy eggs into healthy chicks every time—and give the highest percentage of hatches. They are sure—safe—and simple—made to last a lifetime—sold at prices lower than anybody else will quote you for the same quality—and they make money for you right from the jump and give everlasting satisfaction. Write and get our proposition—our literature is free. Free Trial plan—best ever offered. Don't delay—Write for full information today.

**RACINE HATCHER COMPANY, Box 96, Racine, Wis.**




**100 EGG INCUBATOR \$7.00**  
**100 Chick Outdoor Brooder 5.00**  
**BOTH, FREIGHT PAID \$10.00**

The Advance—Took 29 years to perfect. Thousands now making money with \$10 outfit, raising for market—breeding—selling. Copper tanks, double walls, self-regulating lamp and thermometer complete. Its equal for the money does not exist. Order direct, or full description Free for postal.

**ADVANCE MFG. CO.**  
Box 55, Dayton, Ohio.

## 100 EGG



Triple wall, copper tank, clear top, full height incubator. Dependable regulator, nursery, chick drawers and double glass in door. It is 26 inches long, 21 inches wide and 31 inches high. The \$10 price includes complete incubator, with thermometer, funnel and instruction book, all delivered at any R. R. station east of the Rockies. With brooder the price is \$15. Catalog of larger machines free.  
**Geo. Ertel Co., 146 Kentucky St., Quincy, Ill.**

## Know My Incubator—Know My PLAN.

My plan is so liberal that you will enjoy dealing with me, and my "QUEEN" incubator is such a good, substantial money maker for your farm that you and I will both be more than satisfied to become poultry friends.



**I Pay the Freight.**

Just drop me a line, so I can explain my proposition and let you see pictures and letters of my farm friends who use "QUEEN" Incubators. Please do it to-day. I am still including one of my handy Poultry Record Books with my Catalog. It enables you to keep exact figures on hatching and to know how much you are making. I want you to know these facts when you try out a "QUEEN," because it will prove conclusively that you are getting all the poultry profit that can be made.

Pick out from my catalog the size you want and I will just fix you up to your entire satisfaction—make you a low price, a long time guarantee and allow you an extended trial. Write me to-day or you may forget it.

**Wickstrum, The Queen Incubator Man,**  
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**SOONER** or later, you will own a Cyphers Incubator. Why not start right? Cyphers means big hatches of healthiest chicks—no moisture, heat or ventilation troubles. Used by more Government Experiment Stations, Agricultural Colleges, Fanciers and Practical Poultry-raisers than all other makes combined. Cyphers patented features found in no other.

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# Practical Poultry-Raising

## The Floor of the Hen-House

"WHAT kind of a floor shall I put in my hen-house?"

This is a question often asked and it is one well worth careful consideration, for the birds must spend a large part of their time in the building, especially in cold and stormy weather. Their health, and so their efficiency depend in great measure, therefore, upon the floor of their home.

Some things are to be said in favor of earth. Particularly in summer this makes one of the very best of floors. But it must be kept scrupulously clean all the time, or it will be a source of disease. If we were all as careful about this as we should be, this danger might be lessened very much; but you know how it is. We are "so busy" all through the hot months at our other farm work that there is little time even to think of the hens. The work is left in great measure to the women folks, and it does seem like a job they never ought to undertake, to tuck up their skirts and shovel out a hen-house. I know of women who do it, though, every few days, and they are the ones who are making poultry pay.

Cement makes a fine floor, too. Nothing can beat it for cleanliness, but one of the most serious objections to it applies also to dirt floors—it is as cold as a frog in winter. Do the best you can you will see your hens standing around on one foot trying to get the other warm up under their feathers. That is not the best possible state of affairs, and for that reason I do not believe either earth or cement is the ideal floor for a hen-house.

Good, tight board floors have nearly everything in their favor. But they ought to be made right. What does that mean? Well, to me it means at the bottom a layer of rough boards, then on the top of this a coating of good tar-paper and finally over this a layer of matched stuff, hard wood if possible. This makes a warm, tight floor and it is as easily kept clean as any I know of. Then if the wall underneath be laid properly to keep out rats and such enemies, you have a floor that will last and be comfortable and sanitary, provided you keep it clean. E. L. VINCENT.

## Hens, Fruit and Vegetables

SOME time ago I was asked the following question: "Can the poultry business be combined advantageously with fruit and garden production?"

Yes, most assuredly. I have in mind a friend who some years ago purchased a small place of twenty-five acres for fifteen hundred dollars. The place is of excellent land and situated near a good market which insures top prices for his garden-truck, poultry and fruit. He has built several comfortable yet cheaply erected poultry-houses and now has housing room for one thousand head. The coming season he expects to build more houses. The hatching is done with incubators which are situated in the cellar of the residence, where the temperature is even and there is sufficient moisture. The chicks are brooded in a large brooder-house heated by steam. From the brooder-house the chicks are moved to colony houses situated in a young orchard adjacent to the brooder-house. From these they are finally moved, the pullets to the breeding-houses, and the cockerels and culls to the fattening-pens, from which, when well fattened, they are marketed.

His stock consists of pure-blood White Wyandottes and White Leghorns. He claims it does not pay to bother with scrub stock, as good prices can be secured for breeding stock and if any surplus stock accumulates they will bring better prices from market than thin-bodied scrubs.

He was running this place principally as a poultry farm, but soon found that gardening and fruit-raising payed so well with his poultry that he combined them. With two cows and a horse, the hens produce about enough fertilizer for all his crops. He sets his apple-trees forty by forty feet with a cherry or plum tree between. By the time the apple-trees are in bearing, the plum and cherry trees will have lived out their usefulness. Between these rows of trees are set out strawberries and raspberries and the garden crops. To show how he economizes room, he plants sweet corn in the row with the young strawberries when they are set out. Thus two crops are grown at the cost of one, and, as the corn stalks are removed from the row before the runners start much, no harm

is done in thus crowding the strawberries at the earliest period of their growth. In cultivating and fertilizing the berries and vegetables the trees are kept fertilized and in excellent condition. With this combination of crops he, with the assistance of his sixteen-year-old son, can handle this farm nicely and make enough more from the garden-truck than he could from corn and other grain to buy all the grain for his poultry and make excellent wages for the extra labor.

He is receiving good money a greater part of the summer and fall from his fruit and vegetables, and when this part of his income vanishes, his early pullets begin to lay and his cockerels are ready for the market, which keeps business running smoothly until another season. While he may not be handling as much money as his pretentious neighbors, neither is he encumbered with the expense and never-ceasing struggle to make sufficient from his extensive operations to meet his heavy obligations.

Certainly poultry, fruit and vegetables are a great combination and one in which there is considerable profit if properly combined.

ARCHIE E. VANDERVORT.

## Change Their Bill of Fare

A FRIEND writing from Prince George County, Maryland, says: "Last August all my old hens stopped laying, nor have any of the young ones started laying yet. For animal food over winter I bought one thousand herrings, salted them, and now for about two months have been feeding them, after thorough washing for extraction of salt,



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mashed and mixed with bran every other day, alternating with mashed turnips evenings; some corn mornings."

It is too bad to have one's hens go on a strike when eggs are so high in price, and the question is to bring them back now as speedily as possible and still not kill them with kindness. For the one great reason why our friend's hens have not been laying is that they have not had enough egg-making food.

We are not told whether or not the hens have molted properly; still we will take it for granted that they have by this time put on their new coats. Now for a bill of fare: In the morning make a good mash of about equal parts of corn-meal, wheat-bran, and beef-scrap. Do not have it too wet; just enough so it will cling together and still be crumbly. At noon feed whole wheat, barley, oats or millet, at night cracked or whole corn. Then, if you can get clover, feed them all they will eat of it any time of the day. Cabbage is good, so is lettuce or any kind of green food. And have a dish of good sharp grit and ground shells where they can get it all the time.

These hens must be brought back gradually to hearty food. A light ration at noon and night, with a good warm breakfast in generous measure would be best. The hens must work hard every day. Put their wheat or corn in clean deep straw on the floor of the house and let them scratch. Water, or skim-milk if you have it, should be before them all the time.

After, say, a week of this feeding, I would change to a diet somewhat as follows: Plenty of warm cracked corn and wheat in the morning, about half as much at noon, equal parts of each grain at these rations. At night a good warm mash of corn-meal, bran and beef-scrap, with some wheat-middlings added.

Still another change might be made at the end of a few days, like this: In the morning, cracked corn and wheat, equal

parts; noon, mash made as above; night, cracked corn and wheat again, with green feed all along. I would not feed any more of the fish at present. While turnips are good so far as they go, they do not go very far in supplying egg-making material, unless plenty of other food be given with them. E. L. VINCENT.

The application of the above is not limited to the particular case of our Maryland inquirer. If your hens are not laying, "there's a reason." Perhaps the reason is, as in this case, a deficiency of egg-making material. EDITOR.

## Worm Enemies

SINCE mid-summer about two-thirds of the chickens I have killed have had a bulb on the thin part of the gizzard containing as high as fifteen worms about one inch long, the thickness of a pin, red in color. They do not show outwardly that there is anything the matter with them." E. A. R., Pilkinton, Virginia.

From the description this is one of the numerous parasitic worms that infest fowls of all kinds and is allied to the Dispharagus spiralis, a worm that is highly destructive to ducks at times, especially if their food is dry. The worms reach the gizzard with the food, or can bore into it from the outside. The gizzard of a young fowl was sent me last summer for examination literally alive with these pests, boring in from the outside, having passed through the intestines by boring out. But they will often be found adhering to the inside of the gizzard or encrusted in the flesh close to the inside. Fowls can live a long time and keep healthy if these worms stay in the esophagus or intestines in small numbers, but as they multiply the fowl becomes emaciated, though always hungry, then dies. If left to accumulate in the yards, fowls often die in rapid succession, as though an epidemic was running through them.

I consider turpentine the best remedy. Mix the essence of turpentine, for first doses, with castor or olive oil, two tablespoonfuls of turpentine to four of oil. This will make three doses for one fowl, giving two tablespoonfuls at a time. A fowl can take big doses of turpentine safely. I would not trust to one dose, but would repeat every two days until I had given three or four, after which, until I was sure the worms were all killed off, I would place turpentine at intervals in the mashes so that each fowl would not get less than ten drops at a dose.

These worms are usually first picked up about creeks or ponds, then are brought to the yards, the well fowls picking them up in food thrown on the ground or by drinking pool-water. Liming the yards kills them. I. M. S.

The best way to doctor hens is to give them good feed, good, clean houses and the best care you can.

Don't forget the oyster-shell grit. It beats wasting time pounding up old dishes—that have no lime in them at all.

If you do not get the hens laying early, you won't have early setters, and no early chick. Special care and feeding are the right prescription.

I have seen myriad men "go into the poultry business" and then quit, because it needed attention all the time, not half the time or now and then.

Hens are early risers. Don't make them wait and quarrel until after eight o'clock, and then stuff them to repletion with corn. Feed early, in a clean place; and make 'em scratch for it.

On cold evenings I don't shell corn for the hens; but I cut up the ears in pieces, and make them shell it themselves. Then listen to the singing and busy clamor that keeps them all warm!

Some farmers, and good ones at that, refuse to buy bran at one dollar and forty cents per hundred; but when eggs are thirty cents per dozen it pays to feed it warm every other morning, with corn at night.

You can make green feed for your hens in cold weather by sprouting oats. Put some in a large kettle, pour water on them, let them stand in a warm place till they swell and begin to sprout, take them out and spread them around on a dry floor, turn them over once in a while and pretty soon you will have your green feed all right. A little of this every day is fine.

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## Practical Farm Notes

### A Home-Made Plant-Fumigator

THE following described implement is one of the greatest insect and fungus destroyers I have ever seen, though of simple construction. If made substantial it will last for years. The wheels are off old wheelbarrows; the frame is wood, one and one half by two inch stuff; the handles are four feet long and form a part of the frame.

The accompanying diagrams show the machine in end and side view. The fire-box (A) and the smoke-funnel leading from it are made of one piece of sheet iron; the bottom of the fire-box is lined with an iron door that came off an old cook-stove (shown in dotted outline, at H, in end view). B is the bellows, two and one half feet long, one foot deep, two feet wide in the rear and fifteen inches front. C is the hose that conveys the smoke to the plant-bed frame. The dotted line (D) shows the position of a partition pierced with holes through which the smoke escapes from the fire-box. This partition is seen shaded, through the slide door to the fire-box (E) in the end view. F is the coil spring that closes the bellows. The dotted lines (G) show the position of the air tube leading from the bellows. The air, as it is forced out through this, draws the smoke from the fire-box and cools it at the same time; thus there is no danger of heating the plants.

The dimensions and shape can be varied to suit convenience and materials on hand. A slightly shorter bellows, for instance, would probably give equally good results.

To use tobacco-leaves, stalks or stems for fumigating, they should be dampened a little and then placed on a bed of live coals in the fire-box. The tobacco-smoke fixes the green fly, aphids and all plant lice, and can be used on vegetation. As fumes of sulphur are sure death to all plant life if applied very strong, they should not be used for plant fumigation. They are, however, excellent to rid cold-frame or hotbed soil of the germs of plant disease before the seeds are planted. This

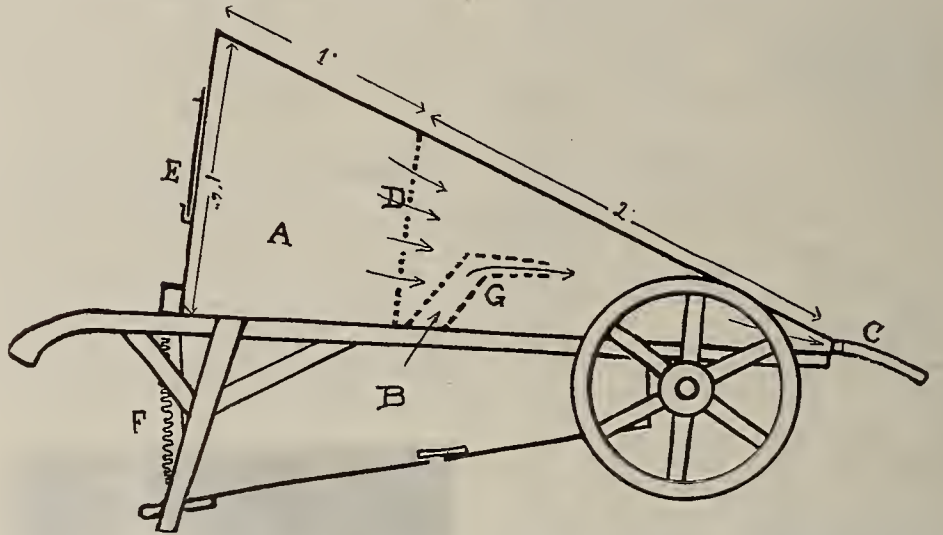
is best done just as soon as the soil is stirred. The frame above the soil should be filled full of the sulphur-smoke, and it should remain about an hour, by which time all spores of fungus diseases will have been killed. The soil should now be stirred and aired, and it is ready for the seed. The smoke is admitted into the frames through a hole into which the hose, that leads from the fumigator, will fit tightly.

The fumigator is not patented, nor is it made by a trust. It is only a home-made affair. I have found good use for it and I believe this plan would benefit many who grow vegetables and vegetable plants in hotbeds and cold-frames.

J. WESLEY GRIFFIN.

### How Nature Grinds Lime

TAKE up whatever farm paper you may happen to lay your hands on, and at the merest glance through its



pages you will be impressed with the stress placed on the matter of maintaining lime in the soil. The topic is not being exaggerated; there is no room to doubt the need of lime for the profitable growth of crops.

We find abundant experimental and scientific proof that pulverized lime is a better form than burned lime. But "How fine should I reduce limestone for my acid soils?" This question has been put to the writer over and over again. I have a letter, sent me several years ago, answering this question, which says: "In fact, you will need the mills of the gods, for it must be ground fine—sixty, eighty or even ninety mesh."

I at once set about what I thought would be an easy task, the purchasing of this machinery. I soon found a machine would not do this work, that it would take two or more machines, and, further, that they were high priced, rather complicated, expensive to keep in repair and requiring skilled mechanics to operate them. So that their output of this fine lime per day was insignificant, compared with the cost. The more I learned on the question: "How can the farmer secure fine-ground lime at a price he can afford to pay," the farther away the answer seemed to be.

Thus it occurred to me to ask a certain soil on my farm, known to be very acid and in need of lime, the question: "How fine should the limestone be reduced?" The answer seems to be any size from two inches down, so long as the chunks are not so large as to be a hindrance to cultivation.

Five years ago (1905) I put small pieces of limestone (Knox Dolomite) in this soil, varying in sizes from two and one half inches long down to one inch. The field was plowed and sown to wheat and grass twice during the five years. To-day I find the pieces averaging two and one half by one and one fourth by five eighths inches have been reduced to one and one half by three fourths by one half, or over fifty per cent, while I could not find the one-inch sizes at all; only here and there a white speck could be seen, which I took to be what was left of those one-inch pieces.

Yes, "the mills of the gods grind slow, but they grind exceeding small." In this case the processes of Nature had been working night and day, never ceasing, never tiring, doing their work without cost and at a rapid rate. All limestone may not break down and give available lime in so short a while, but, at any rate if all the stone was reduced to one fourth of an inch and smaller or even one half inch, sixty to seventy per cent of the lime would be available at the time of application and the remainder will all become available in a short while, about as soon as the soil needed it.

Like every good rule, this one has its exceptions. There are certain hard limestones, the kinds that make good road material and building-stone, that are very slow about becoming available, unless finely ground. Where immediate results are necessary, also, the finer rock is desirable. But balancing economy against results, it is safe to say that with most limestones and for most soils we farmers need only to take the first steps and then let the forces of Nature, "the mills of the gods," do the rest.

O. P. R. FOX.

### Winding Up the Sugar Season

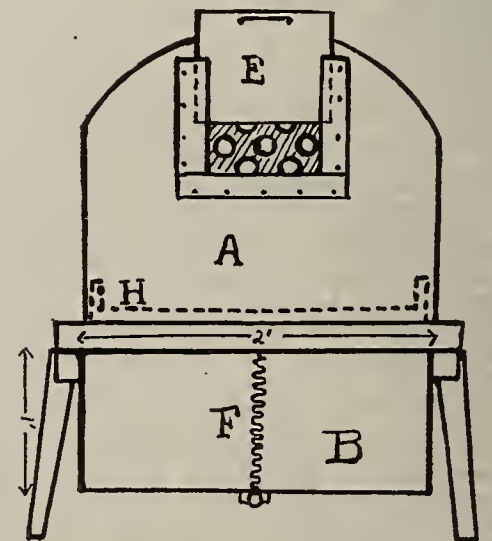
WHEN it is decided to "quit the camp," either from press of other work or on account of poor runs, everything should be put in good shape to stand until another season. Very often, when the season ends in a warm spell, the sap sours in the buckets and, of course, they

must be cleaned up. When it has been decided to quit, the "spiles," or sap-spouts, should be pulled and the buckets brought into the sugar house.

It is advisable to heat the evaporator of water and in this scald the buckets one after another, washing out any of the film which may have formed in the warm days. The buckets should be turned over to drain, then stacked in each other in bundles of convenient size to handle. The sap-spouts should be scalded and placed in one bucket for the following season; evaporator, tanks, skimmers, barrels and other things should be cleaned up and put where they belong.

Galvanized buckets may be stored almost "any old place" in shelter, but while we do not use wood buckets, I am of the opinion they should be stacked in shelter where the sun could not shine on them or the dry winds strike them.

Sugar houses should be closed up so stock cannot get in and tramp things. There is a great satisfaction, I know,



from experience, in having everything clean and ready for use when the next sugar season comes.

Wood can be stored any time, spring, summer or fall; if there is no shelter to store it under, stack it in wigwam style and it will keep in good shape unless some hunter finds a rabbit under it, in which case you will find it resembling the path of a cyclone. OMER R. ABRAHAM.

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Before plowing-time comes, how are the single-trees? Sound?

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There's no denying that some eastern and mid-west truck farms yield heavily per acre, but even the best of them are dwarfed by comparison with the far-west wheat grower's returns. It is hard to find many truck farmers who can honestly say they get more than \$200 net income per acre after expenses and rent or taxes are paid. On this basis the far-western wheat grower beats him two to one. See this country yourself. Take

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## Farm Notes

### Seventy Bushels of Oats

A SUBSCRIBER wants to know the system by which the Illinois farmer mentioned in one of my articles increased his yield of oats from forty to seventy bushels per acre. I wrote him and asked how he did it, and he said, "By farming right!" I give a portion of his letter, boiled down somewhat and made plain:

"When I got hold of the forty I am farming, it had been a tenant farm about eighteen years and was pretty well skinned. My first crop of oats yielded about twenty-five bushels an acre. As soon as they were cut I plowed the land and sowed it to cow-peas. They made a good growth and some of the pods were beginning to ripen when a light frost tipped them. I then turned the entire outfit under with a big plow and rolling cutter. Everybody said plant corn, but I wanted oats. The land was in fine shape when I plowed it the following spring. After plowing I harrowed it four times and it was like a garden. I then drilled in two bushels of oats to the acre. People thought I was a crank to go to so much trouble just for oats, but I wanted oats, not weeds and space. I got the seed from Wisconsin, and it was fine. The yield was sixty-two bushels an acre. I repeated the process and the last year the yield was seventy-five bushels an acre. This year the patch will be planted to corn. You see, I not only fertilized the soil, but I also put it into the best possible shape for the seed. If I had plowed it over—just skimmed it—and broadcasted the seed, thick and thin, among the clods and run the harrow over it once, as the other fellows do, I would probably have harvested about thirty bushels an acre. And if I had sown oats grown in my locality until they were about run out, the crop might have been twenty bushels an acre. In farming there is nothing like doing things right."

I rather think that man knows something about farming. If a workman in a factory was to turn out such jobs as some farmers turn out, he would be retired in a hurry. Very often the poverty-ridden farmer is one who just half farms. At one place I worked when I was a hired man I had it dinged into my ears quite frequently that what was worth doing at all was worth doing well. This applies to farming in all its branches. Farmers generally are doing their work better than formerly. Improved machinery enables them to do the work faster and gives them a better chance to do it better. But there is room for much improvement.

FRED GRUNDY.

### False Economy and True

IT is sometimes difficult for one who is not acquainted with all the circumstances to pass judgment on the wisdom of his neighbor's practice, but these two rules will hold in so many cases that it is fairly safe to put them down as axioms:

Never buy what you do not need now or will not surely need in the near future.

If you intend to stay on your farm and follow a certain class of farming, buy what you need for it—don't depend on borrowing.

To illustrate the second rule first, I had a neighbor, owner of his own farm, who said "that he could get his wheat cut on the interest on the money invested in a binder." He depended on getting one from his neighbors when he needed it. He was fairly successful until last year, when he was compelled to wait just a few days, in order to get a machine. During that time his wheat damaged to the extent of several bushels, which means several dollars at present prices. But this was not all; delayed cutting made delayed threshing, and delayed threshing caused the wheat to get a thorough soaking by a heavy rain, which also did its share to the already damaged grain.

The above instance is only one of many that have come to my notice. A few years ago a farmer in our community had spoken for a drill from his neighbor, but was obliged to wait a few days, until the owner was through using it, which made wheat-seeding so late that the ground began to freeze before he got through. The result was a crop scarcely worth cutting, while the labor of seeding and cutting were the same as for a good yield.

The loss that this one man sustained would have bought enough drills to last him for the rest of his life, and he has no drill yet.

It is proper to economize, but not as these two men did.

There is one thing that, too often, is the last to be economized on the farm—time. There is a lot to be gained by the habit of spending time now to save it later. One day last winter when the ground was frozen and we could not do much at anything else, the hired man and I, with two horses hitched to a heavy pole, broke thirty acres of stalks, without working so very hard either. The man across the fence let twenty acres of stalks stand and cut them with a hoe in four days last spring, when each day could have been well put in at plowing.

With some practice, good judgment and forethought, farmers could save money, time, anxiety and health. F. W. T.

### Trees—They Work All the Time

[CONTINUED FROM PAGE 5]

the well-known white hickory. This tree, under favorable conditions, should be ready to cut for its timber in from twenty to twenty-five years from the time of planting.

The bass-wood is an indigenous tree and thrives here. Its soft, light wood, formerly rather despised, is in demand in the manufacture of various articles, and there is no doubt but that a grove of this quick-maturing variety would grow into money.

The box elder is a favorite tree in many parts of the corn-growing states for its easy culture and rapid growth. It is much grown where quick-developing shade-trees are desired upon lawns, to adorn the streets of towns and for wind-breaks. It is not considered of any particular value for its lumber, but it is of importance as fuel. Where the situation is remote from railroads or where, for any reason, fuel coal is high-priced, the box elder commends itself for this purpose.

In low or moist places the white willow grows well. Such places on the farm are usually unproductive, and they can be put to good use by planting them to this tree. It grows very rapidly, and in the course of a few years a grove of willows will produce an abundance of soft wood admirable for summer fuel for the cook-stove. Some farmers in southern Iowa are utilizing the wet and springy places on their farms in this way.

I have here mentioned only a few of the more common of the timber trees that may be profitably grown upon the farm. There are others, many of them, such as the elms, the maples, the hackberry, the butternut, the white walnut, the hickories, etc., but their value in this connection has not been so well demonstrated as that of the ones mentioned particularly. The farmer cannot go amiss, however, in devoting space upon the farm to any or all of them. They all thrive here in Iowa, and throughout most of the middle West, and they grow with sufficient rapidity to produce commercial timber within twenty-five to thirty years. There is in the market a distinct demand for the sort of lumber any one of them produces, which demand is bound to be greatly enhanced within the time mentioned.

Well-posted economists tell us that a timber famine menaces the country in the not very distant future. The farmers of the country have the opportunity to prevent it or at the least to very greatly ameliorate it, and in doing so to put a "right smart" of honest cash into their pockets.

There are in the state of Iowa approximately three quarters of a million farms. Suppose each owner of a farm in the entire state were to plant two acres of timber. There would be added to the forests of the country one and a half million acres of growing trees. Who can compute the worth of those added acres of forests to the people of the state in the years to come, or prophesy what beneficial effect they would have upon the industries of the commonwealth?

It would be worth while for this subject to be taken up by the farmers' institutes. It ought to be presented to the intelligent farmers of the country and discussed in all its bearings upon the questions of agriculture and the general welfare of the country. The farmers are becoming more and more alive to the best phases of modern agricultural thought, and more and more zealous in applying practically the best of the newer thought in relation to their work. But this subject has been hitherto given very small place and it deserves a wider publicity. There is no doubt but that if their attention is intelligently directed to it, the growing of timber as a farm crop will come to its rightful place in American agriculture.

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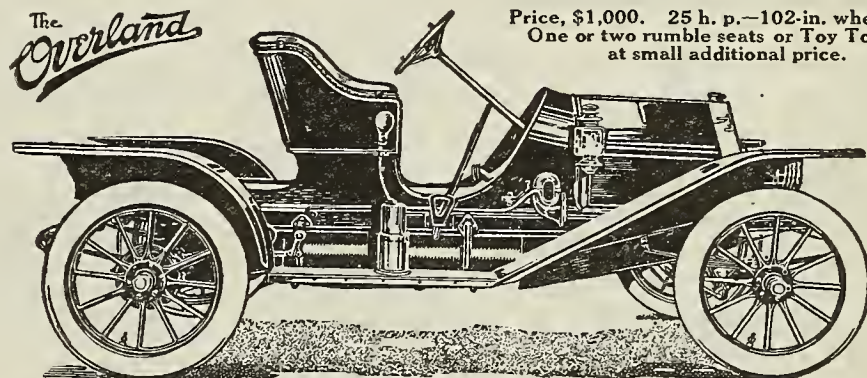
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## Practical Farm Notes

### A Rapid Way to Test Seed-Corn

**A**N AVERAGE of tests of seed-corn taken at a number of institutes throughout the heart of the corn belt shows that the average germination is about sixty-five per cent. If corn of this kind is planted it means that thirty-five acres out of every hundred will produce nothing. The only practicable remedy is to test every ear. There are several methods of doing this. The old sawdust-box method is too cumbersome to use on a large scale, and the numerous patent seed-corn testers on the market, while convenient, are expensive.

By the "cloth roll" method, a description of which follows, the work can be done as rapidly and as conveniently as with a twenty-five-dollar tester. The cloth rolls will take up even less room than the tester.

All the apparatus that is needed is a few strips of muslin about six feet long and six inches wide. A bench to work on and a few barrels to throw the corn in as it is tested will facilitate the work. A wide board laid on a couple of barrels makes a good bench. Lay out a row of corn on the bench. Moisten one of the strips of cloth and lay it out in front of the row of corn. Beginning at one end of the row of corn, take out from four to six kernels from each ear and lay them on the cloth. Place the kernels from the first ear at the left side near the end, those from the second at the right side, those from the third at the left side in line with the first, and so on. When the work is completed there will be a double row down the cloth.

Now begin at the upper end and roll up the strip of cloth. Use both hands, keeping it stretched tightly crosswise. If this precaution is taken there will be little danger of the kernels becoming mixed. After the cloth is rolled you will have the kernels from fifty or sixty ears in a compact bundle smaller than an ear of corn.

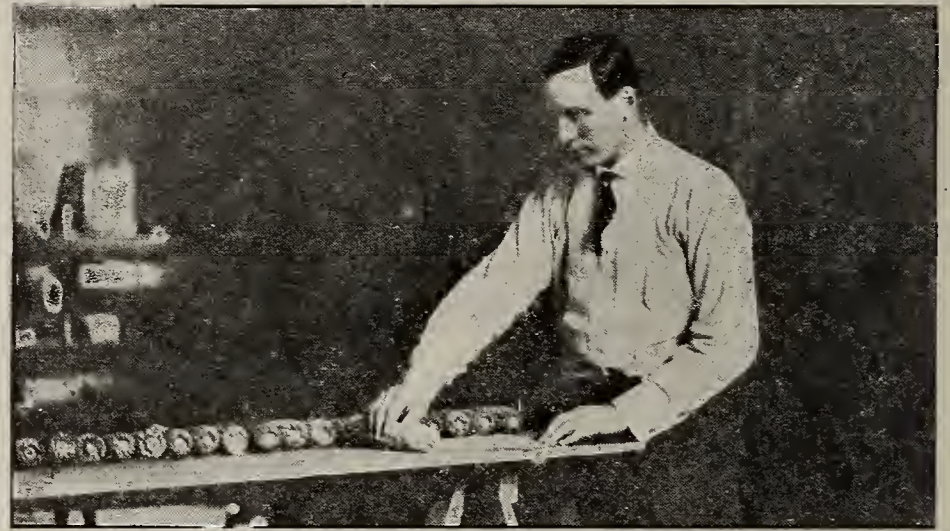
Mark the number of the last ear in the row on the cloth with a soft pencil.

Then drop the roll in a pail of water. Lay out another row of corn on top of the first and prepare a second roll. As many as a dozen or more rolls can be prepared at once if desired. If each roll is marked carefully with the number of the last ear tested in it, there will be little danger of getting them mixed.

The rolls should be left in the pail at least twenty-four hours, so that the kernels may become thoroughly soaked. Then pour off the water, cover the pail with a piece of cloth to prevent too rapid

Seventh, a system of cropping which will leave much humus or vegetable matter in the soil; rotation of crops or planting peas or annual clover.

The best thinkers here do not charge all the advance in the prices of foods to the tariff. They ascribe a great deal of it to the failure to increase the corn crop of the country in proportion to the increase of the demand. The United States passed the two-and-one-half-billion bushel mark in its corn crop in 1902, since which time, in no year, has there been any great



Unrolling the Cloth Preparatory to Reading the Test

evaporation and set it in some place where the temperature is fairly warm all the time.

In two or three days more the corn will have sprouted and the test is ready to read. Begin with the last roll first, as this represents the top row of corn in the pile. Unroll the cloth on the table, and check up each ear with the kernels which were taken from it. It is but a moment's work to go over a row of ears, throwing the dead ones into one barrel, the weak ones into another and the strong ones into still another. Then take the next roll in order, and so on, until the entire test has been read. This method has been used by seed-corn breeders in testing on a large scale and has proved very satisfactory.

C. V. GREGORY.

### A Campaign for More Corn

**N**ORTH CAROLINA is going to double its corn yield this year if weather conditions are good. This is a wonderful statement to make, but then nobody ever saw more steady enthusiasm than the farmers are bringing to bear on corn-growing now. The agents who have charge of the United States demonstration work are making great progress. Reports showed one thousand five hundred demonstration farms in the state, each conducted by a farmer on his own land, this being double the number a year ago. It is also shown that the average yield of corn on these farms had increased within the year from thirty-seven bushels to forty-six. This year the number of such farms will be more than double again.

Your correspondent has sent out thousands of the pamphlets containing the story of John F. Batts' corn-raising, this covering also the other experiments made in this contest. A study of these reports is of interest and value. While methods of the different contestants varied greatly, there were a number of points which all agreed were vital. Here are the points:

One, thorough preparation, broadcast fertilizers; deep plowing, at least twelve inches, at least twice; repeated harrowings with disk harrows before planting; this being well expressed by one man, as follows: "Cultivate your crop before you plant it."

Second, plant thick in a row, leaving stalks about ten inches apart in the row.

Third, plant the grains four inches deep and cover lightly.

Fourth, fertilize heavily, making three applications, one before planting, the second when the corn is about twelve inches high, the third when the stalk begins to joint. The last application should be by some quick-acting fertilizer, like nitrate of soda or muriate of potash.

Fifth, rapid cultivation, until the plant begins to joint, then stop. The last plowing should throw some dirt to the row, leaving the middle a little lower than the corn row, but not nearly so much as the old method of hilling corn did.

Sixth, plant only high-grade seed-corn, selecting a variety which does not produce a tall stalk.

increase, except in 1906, which was remarkably favorable. The increase in corn production in the last ten years has not been nearly so great as the increase of the population of this country and its demands, not to speak of the increase in the foreign demand. Illinois seems to have been the only state, according to the North Carolina Commissioner of Agriculture, which has set itself to work to increase the production of corn, which the commissioner holds to be the foundation of true agriculture. The United States, the state, counties, towns, townships and school districts are now all en-



"The Kernels From Fifty Ears in a Bundle Smaller Than an Ear of Corn"

gaged in promoting corn-growing in North Carolina. The oldest inhabitant never dreamed of anything like it.

FRED A. OLDS.

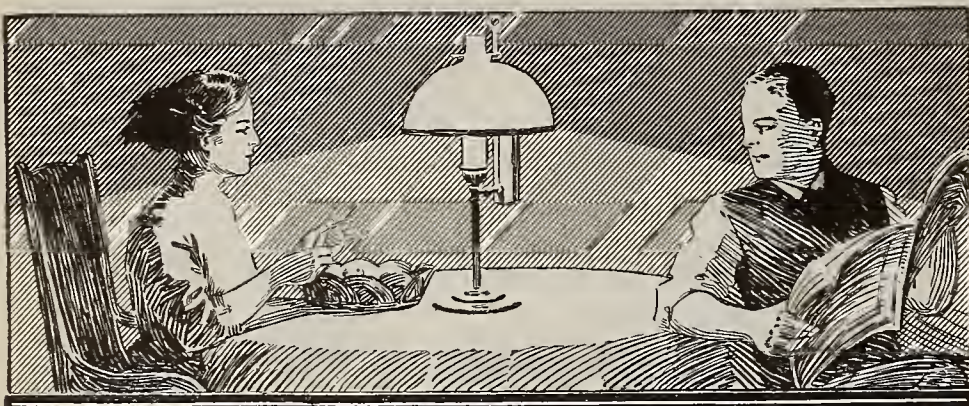
### Seeding for Pasture

**M**RS. A. B., of Ohio, will find it a difficult matter to make anything fit for pasturage grow on those gravel hills. Three years ago we renewed a fizzled-out pasture by seeding heavily to rye and a mixture of orchard grass, red top, alsike, timothy and white clover. It was sown early in the spring and harrowed in as thoroughly as was possible. Some people said it was a funny time to sow rye, but it grew finely and helped the other grasses to get a hold on the soil. It made pretty good pasture that season, and by not pasturing too close it made good pasture the following two years.

It is possible that the worms working at the corn roots were the well-known corn-root worm. I would not plant that land to corn this season. Oats would do all right; in fact, any crop but corn. Next year corn will grow on it all right.

FRED GRUNDY.

If the hotbed is lined below the surface of the ground with thick boards, it will retain the warmth better and maintain an even temperature than the unlined trench.



### "Let's Not Buy Another Thing Till We Put the Fences Right"

**T**HE far-sighted farmer will say that when temptations arise to let the ready money go for some luxury. The luxury is an *expense*; the good fence is an *investment*—a *producer*. A farmer is losing money fast until he has his farm fenced off into a sufficient number of fields to permit of the proper rotation of crops and the most advantageous pasturing of stock.

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**AMERICAN FENCE**



## With the Editor

THIS movement of the administration to raise the rate on second-class mail has carried us into politics farther than we like to go. We like to keep these columns sacred to the interests of the farm. In making such protest as we have against the proposal to raise the postal rates, we have not sacrificed those interests, we believe, though we have had to take up matters of political action. Some of our readers have stated our views so well that we must quote a few sample utterances among the scores which we have received.

"If this increase in rates takes place," says one, "it will place a great obstacle in the way of the self-education of the American farmers, and in many cases stop it altogether." We think this is absolutely true. How many farmers take but one paper, and would stop that on the first upward step in price? And for such the light of self-education would be put out: Light is not so plentiful in the waste places that any of it should be quenched. "Nothing the Rural Life Commission could do," says another reader, "to advance the interests of the farmer, could take the place of the periodicals that would be killed or placed beyond the farmers' reach by the proposed increase in second-class mail rates. Is it possible that President Taft does not understand this?" Says another, who glows with righteous indignation: "I think it is a burning shame to tax the intelligence of the people to pay what the railroads swindle the government out of!"

No, we haven't gone astray from the path of farm interests in making the fight we have made.

Of course, we have been making our own fight, too. But it so happens that FARM AND FIRESIDE's fight is yours. Do you know that the publishing field is the one great field outside of farming which is not dominated by the trusts? Publishing periodicals is an open field. The great interests buy up magazines and periodicals once in a while, and own them and run them. That is perfectly proper—if the ownership is known. But it is a significant fact that as soon as a great magazine begins telling things in the trust's way, it loses readers. People read between the lines. If United States Steel, Standard Oil and all the railways should pour money into a farm paper or a monthly magazine, they could not give it away and be sure it would be read, not if they printed it on Japan vellum and hired the artists of the world to make it beautiful. It isn't so much that the press is free; but the people are free to read what they please, and no periodical run in the interests of any one but the readers can live with any life that amounts to anything. With the daily paper the case is somewhat different; but even with the daily, the readers, in the long run, control the paper, or it ceases to have readers.

You farmers would hate to have a great farming trust established, for which and with which you would have to work, wouldn't you? Well, I should hate to have a great Periodical Trust established with which I should have to cooperate or quit. And that is another reason why we have made this fight. We don't want to be driven into the arms of the express companies by the action of the government. The Saturday Evening Post has stated that within distances up to five hundred miles it can send papers now cheaper by express than it can by this postal rate that Mr. Hitchcock and Mr. Taft say loses the government money. The interesting question for us all is, why does the government lose money in carrying the same sort of matter on the same trains, for more money? But FARM AND FIRESIDE likes to have Uncle Sam carry its packages and mail-bags. It likes to use the people's errand-boy to serve the people. But if we are all driven to the express companies by an increased second-class mail rate, we shall have to go. Getting to our readers will be a matter of bargaining with the great Express Trust.

Would the papers free from trust domination have the same advantages in dealing with the Express Trust that the papers friendly to them would have? Here's something to think of. Do you want to be served by the express companies or by your own errand-boy? Which is best for the freedom of the press? I don't know what you think, but I have strong opinions of my own.

We prefer to be free; we prefer to take the message of the business man—our advertiser—to our readers, freely every issue. We take pride in offering a medium of communication for the youngest and most independent industry to vend its

wares. We want Uncle Sam to carry these messages, both of farm truth and business truth, to the people, and to help seller and buyer in this free market by the parcels post. We don't want Uncle Sam to lose money on the deal; but if he loses on a deal in which express companies can make a profit, we want the matter investigated to the very bottom before making our readers and our advertisers and ourselves the scape-goat for bad business methods. And we don't want to be driven to the express companies. So much for the postal matter; and, in conclusion, we wish to congratulate our readers on the interest they have taken in the matter and the intelligence they have shown in acting.

But this episode doesn't make FARM AND FIRESIDE a political paper. Far from it. We have received a lot of criticism of Mr. Taft; but we are not against Mr. Taft. Because he is president of the United States, we are anxious for his success in every good thing—for that means good things for the people. But as to his reelection, we don't care a snap. We hope that he may make so good that party lines will vanish in a great demand for his reelection. Just now this seems scarcely likely. All we care about it is that his fate be determined by his success or failure in serving the people.

Neither do we care a snap what our readers think of public men. All we care is that they be given such facts as we can give them in the limited space we can devote to public affairs, and then let them think what they please. Our point is that they ought to think—that's all. Once let the people of this great land begin thinking honestly on any subject, and that subject is sure to be dissected and its true inwardness opened up. Some of our readers accuse us of a "rose-water policy" because we don't call certain people thieves and burglars and embezzlers of power and all that. Really, now, did you ever convince any one by calling names? If you believe that this government is run by thieves and embezzlers of power, and base your thoughts on facts as we have given them to you, why, that's all right. Go on thinking so; and act accordingly. But we don't think so, and we wouldn't say so if we did. The prosecuting attorney never calls the criminal a criminal—not if he's a respectable lawyer. He lets the facts talk to the jury. We are not the prosecuting attorney, and so, of course, we are not trying to convict any one, but you are the jury. Let the facts speak to you. Think what you please—only think.

We don't care a snap what you think of Secretary Wilson or Luther Burbank. We give you the facts—that's our job. One lone reader took offense at our article on Burbank—although we told some very disagreeable truths about him—suspecting us of being secretly interested in some of his plant creations. And one dear suspicious soul took our Wilson article as an attempt to bolster up "Tama Jim's" tottering career. These things are food for smiles—and yet they are, in a way, sad. Pretty soon we shall print an article on Campbell the Dry Farming man, who has, I think, been very shabbily treated by the great secretary. And then Wilson's friends will—once in a great while one of them—accuse us of an attack on Wilson.

Bless you, we don't care what you think of Burbank. If you never buy a thing he has propagated, you can farm successfully. But, all the same, Burbank is a great horticulturist, whether that plant is *solanum nigrum* or not. And Wilson has been a great secretary, no matter if he has discharged Pinchot and sent out bad crop reports. There aren't any absolutely bad men, and none absolutely good. The editor of this paper is not quite perfect, and you, dear reader, are not. And think what you please of these men. We give you the facts; draw your own conclusion. The search for truth is a sacred thing, as sacred as the Quest for the Holy Grail. No man has a right to impose his mind's conclusions on another mind. It is a sort of violence. The noblest function of the soul is to hold the light and show what is exposed, and let the beholder get at the truth himself. It's the only truth he'll observe, anyhow. Hold the baby's hands at table, and he will struggle to feel of the coffee-pot and never be satisfied. Tell him it is hot and will burn him, and let him feel of it. He will respect your views after that, and you won't have to hold his hands. Let him learn for himself.

Mr. Taft, that second-class mail-rate coffee-pot is HOT!

*Robert L. Smith*

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F. N. Goux, Vernon, N. Y. writes: "I cannot speak in high enough praise of your instruction. I am at present handling a \$1,000 horse. People bring me horses to train from miles around."

Wm. N. Kelley, Hillsboro, Wis., says: "I am making lots of money here at home, and your course has made me so successful I am planning to go on the road training horses and giving exhibitions."



Roy Fordyce, 04124 Adams St., Spokane, Wash., writes: "I am delighted with your lessons. Have trained a three-year-old stallion to drive without a bridle or lines. I would recommend your course unqualifiedly to anyone."

A. W. Bower, Tiffin, Ind., writes: "You have made me a practical colt-trainer. Have all I can do and making more money than ever before."

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22 Academy St.

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## The Farmer and High Prices

SOME people who think they think talk as if in their imitation mental processes there has happened something that makes them think they think the farmer to blame for the high cost of living. And from such utterances there goes forth a wave of pseudo-cerebration which communicates an appearance of thought to the brows of a host of people who do not even think they think, but take their mental sustenance from rubber tubes of printed or spoken matter put to their mouths by others.

That the farmer cannot be to blame for the high prices is plain to any one who even tries to think. It takes combination to lift prices. The farmers have no trust. It takes capital and cold-storage warehouses and elevators and the ability to wait to lift the prices of farm products. The farmers haven't the capital—they have to sell in the main as their products are ready for sale. They haven't the cold storage nor other warehouses. In the main, the farmers are living from hand to mouth, paying this season's bills with this season's crops, forced to break their own market by over-selling, in luck if some of last season's obligations have not survived to be taken care of now.

Those who really desire to know the cause of the high prices had far better look to those people—whoever they are—who have the capital, the cold-storage plants, the elevators, the combination and the ability to wait and hang on. The farmer will be mightily pleased and benefited to have the really active price-booster located. He would like a greater share in the prices. He needs it.

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"The farmer is responsible for the cost of living." The facts brought out at the first annual convention of the Milk Producers' Protective Association in Chicago on February 7th showed how he boosts things in the milk trade, for instance. In February the farmers whose milk product fed Chicago received one dollar and seventy-five cents per hundred pounds for milk. This is at the rate of a trifle over three and one half cents a quart. In March he gets twenty cents less a hundred. The consumer pays eight cents a quart, or five cents a pint, for this same milk. Thus we see how the cost of living is boosted by the farmer. By giving his milk away he might reduce the price to the consumer by about one third.

That the farmers have a suspicion that the consumers' dollars are going into the wrong pockets may be judged from the song the convention sang:

We're here to fix the prices, Illinois, Illinois,  
 We're here to fix the prices, Illinois, Illinois.  
 Borden, Bowman and the rest  
 Must give what we think best,  
 Or we'll put them to the test, Illinois, Illinois,  
 We'll knock them galley west, Illinois!

If the farmers should find themselves able arbitrarily to "fix the prices," the situation might still be a bad one. For we are as selfish as any one. But if they can eliminate by cooperation the throat-cutting "spread" between the price of milk on the farm and at the city back door, they will have made it possible for milk to be dearer where it is produced and cheaper where it is consumed. And this is the slogan for farmers' co-operative societies everywhere: Cheaper produce for the consumer, better prices on the farm. Such a result is quite within the bounds of possibility under intelligent organization.

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Can you step lively and yet not be in a hurry? Practice that.

You cannot gage the power of the engine by the noise of the exhaust.

If you haven't tested your seed-corn, you have overlooked something. But it isn't too late yet. Planting corn is the worst of gambling, unless you absolutely know as to the germinating quality of your seed. And it is the silliest of bets, too. You wager a year's work against a day's trouble that a thing is so, when by examining into the matter you could know.

Success is never on the bargain counter.

If faking were confined to the arctic region we would all be thankful.

In yourself show to your neighbors what sort of neighbors you desire.

The farmer also furnishes a good living for the man who buys from him and sells again.

Hammering cold iron is fun by the side of trying to do farm work without a well-arranged plan.

There is a lot of satisfaction in the knowledge that you could spend money foolishly if you wanted to.

Don't be deceived by sunny days and sit with your coat off when you are hot from work. It is the cold, sneaking wind of March that breeds pneumonia.

## The Farm Boom in the East

NEW YORK is crowing. The cause of the jubilation is that she has so far recovered her farming stride as to be where she was in 1880—or a little ahead of it. This is not sarcasm—it is real cause for rejoicing. It means a boom in Eastern farming.

People of little penetration have wondered about the "abandoned farms" of the East. There is nothing to wonder about. In the first place, there haven't been many—perhaps none. All the so-called "abandoned farms" have been held tightly by some one all the time. They were held on such terms that it didn't pay to farm them, that's all. There are "abandoned farms" similarly held in the city limits of Chicago, St. Louis, New York, London and in most farming districts, so far as that goes.

But why did it not pay to farm the New England and other Eastern farms that went out of use? There is no mystery about that, either. The railways carried the emigrants west. The railways boomed the West. And the West boomed itself. How could any statesmanship expect to hold population on stony hillsides robbed of their humus, and in stumpy regions held at more than their economic value, when the ways were greased for sliding population to lands black with richness and ready for the plow? The Eastern lands had to become so cheap as to be almost free before they could compete with better lands actually free. Cost of moving and love of the beauty of the old states are the things, mainly, that kept them from being still further depleted of farmers.

But did you ever see waters rush into a closed bay, and rush up the other side, until they had to fall back? What happened? There was a back-wash almost as high as the inrush—back to the very point of starting. That must take place in the United States in the immediate future, and the back-wash of emigration will bring back the hands to every eastern region that is fertile, as fast as the land-owners will allow. The great wave is now climbing into every mountain valley, into every irrigated region, into every good "dry farming" region and piling high against the impassable wall of the Pacific. It is carrying land values to dizzy heights in the middle West and the fruit valleys of the coast states. Land is cheaper in the heart of England than in the apple regions of Oregon, and a farm can be bought for less money per acre within motoring distance of London than within the same mileage of Kansas City or Chicago. The back-wash simply must come.

And the lands of the East are good lands. They are not worn out—they can be, and will be, replenished with humus and supplied with the mineral plant-foods they need. Scientific farming will restore the imperial agriculture of the Empire State and make New England blossom again as of old. The well-to-do farmers of the West will come back and do it, in aid of the local agricultural uplift. The people of the cities will do it. Intensive farming will do it. They are doing it all the time. There's a crescent stream of emigration from the Mississippi Valley to the old home "back East." The West owes the East a lot of people, and it will surely send them—unless the land-owners prevent by booming prices.

## The Cost of Marine Freights

ADMIRAL ROBLEY D. EVANS is a good, hard-fighting old sea-dog—but what he doesn't know about trade would be a very valuable contribution to the sum total of human knowledge. And yet he is as intelligent as the average. We have in mind his black-typed anxiety in Hampton's Magazine as to the amount we are paying out each year to foreigners in ocean freights, amounting to five hundred million dollars a year. "Remember," says the good admiral, "that all this good money has gone into the pockets of foreigners, and a similar sum will go every year without benefit to our people beyond carrying their products to market."

A sad case, truly! And it goes all through our business life. We pay millions to draymen, and get nothing for it—but our hauling. We pay the Asiatics millions each year for tea, and get nothing in the world for it—except the tea. We pay hundreds of thousands of dollars a year to the Germans for meerschaums, mechanical toys and harmonicas, and never get a solitary thing for the money—except the goods. And we pay to British, Germans, Norwegians and Spaniards all those millions for carrying our goods over the sea, and bringing goods to us, and they never do a thing to earn them—except carry the goods!

The admiral and those who with him think we are being drained of our wealth by these freights fail to remember that any one who can do our hauling cheaper than we can do it ourselves enriches us by furnishing the equipment and doing it. And if we could do it as cheaply ourselves, we should have been doing it long ago. American merchants, all things considered, are equal to the task of keeping from being robbed by high freights. We are getting our freights about as cheap as any one—rely on that.

Cheer up! If we get five hundred millions' worth for five hundred million dollars, who loses?

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Avoid the mistake we have seen farmers make year after year—that is, putting out more crops than they could cultivate well. Weeds grow while you sleep, and help is often hard to get.

How many readers of FARM AND FIRESIDE are testing their cows? We should like to read a lot of letters giving experiences in this, and such as we think worthy of a place in our columns, we shall gladly publish and pay for. If you are in a cow-testing association, let your fellow-farmers, who are not, have the benefit of your experience. If you are making the tests individually, what methods do you use? And in either case, how was your judgment on your own cows borne out by the tests?

## What is Conservatism?

THIS question arises on reading the report of the National Waterways Commission. It is a very conservative document. The tone of it is as judicial and calm as the report of the auditing committee of a bankers' convention. Yet it contains one recommendation that was radical less than three years ago. This is the proposal that laws be enacted to prevent railways from killing water traffic by unfair manipulation of rates or other sinister methods. It is a conservative recommendation for all its newness. The railways can kill almost any traffic by water if permitted. They can do it because they have more hands and feet to fight with and more weapons and a better organization. There are many ports now where no vessel can land, except by permission of railways, owing to the railway ownership of wharves and waterfront. The National Commission says a wise word, too, when it calls attention to the importance of terminals, handling machinery, warehouses, docks and the like along waterways. What is the use of a waterway without free docks and good appliances on them? And yet how many towns are trying to help themselves to these things? Heaven, it will be remembered, helps those who help themselves. Maybe Congress has similar propensities. Waterways advocates may well take notice of these conservatively radical suggestions.





By Judson C. Welliver

Will Congress Stop Speculation in Futures? . . .  
Selling the Crop Before It Grows . . . Some  
Virtues of the System . . . More Vices . . .  
Deals in Blue Sky . . . If Any One Wins, It is  
Not the Producer . . . Wanted—Pressure.

AT THE time of writing this letter, there is pending in the Committee on Agriculture of the House of Representatives a bill of the utmost importance to every farmer in America. For that matter, it is of the utmost concern to almost everybody else.

This is the bill by Representative Chas. F. Scott, of Kansas, to prohibit dealing in "futures"—that is, buying and selling agricultural products on contracts for their future delivery.

In brief, the bill proposes to put out of business the Cotton Exchange of New York and perhaps to close up, certainly to reform radically the wheat and provision pits of the great commercial cities. On its face its purpose is not so sweeping. But these are the probable effects of its enactment.

"Dealing in futures" is undoubtedly gambling. It is betting on what the value of a given commodity, bought or sold to-day, will be two or three or twelve months hence, when it is to be delivered. If you sell ten thousand bushels of wheat for May delivery, at one dollar a bushel; and if on the last day of May you can get that wheat for ninety cents, then you can fill your contract by buying nine thousand dollars worth of wheat, and you make one thousand dollars. If, on the other hand, you are forced to pay one dollar and ten cents for your wheat, you lose one thousand dollars.

If now, when the day of delivery comes and you find you have lost one thousand dollars on your deal, you go to the person to whom you are to make the delivery and pay him that one thousand dollars in cash, instead of bothering to scrape together the wheat and cart it over to his elevator, then you will have completed a transaction exactly parallel to the so-called gambling operations of the wheat pit and the cotton exchange. Of course, it's gambling.

Deals in futures do not always contemplate actual delivery of the goods. The contracts, indeed, are made to provide for delivery, and they can always be fulfilled by making the delivery. The fact remains that operators very generally do not make deliveries or insist on them. They pay the "paper profits" in cash, and make no deliveries.

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THESE cases represent the purely gambling operations.

Of course, if you sell wheat for May delivery and find you are heavy loser, you are always at liberty to go out in the country, buy up all the wheat that can be had and tender it to the consignee under your contract. That is the method by which P. D. Armour smashed the famous Leiter corner. Instead of taking his medicine and squaring up his paper losses with cash, Armour went into alliance with the elevator lines and the railroads, bought every bushel of physical wheat he could find and rushed it in to Chicago to tender to Leiter. Leiter didn't want wheat; he had no place to put so much of it, no organization to market it, and his corner broke down. Any one with the requisite money and nerve is privileged to settle on a delivery basis. But the fact remains that most of the transactions in futures are not so settled.

Now, it is very difficult to get at the merits of dealing in futures and to decide whether it is all bad or all good. There is much in the system which is absolutely necessary. Let me use the commonest illustration.

A cotton spinner in Lowell is habited to selling his cotton cloths all over the world. He has traveling agents or factors in China, Australia, Burma, Arabia, Berlin, Riga, Moscow, Rio Janeiro, Guayaquil—everywhere. He must sell his goods before they are made; before the cotton is grown from which they are to be made. He must make a price on them months ahead. Obviously, he cannot set that price until he knows what his raw cotton is going to cost.

So he goes on the cotton exchange and buys ten thousand bales of cotton for delivery next November. The price he contracts to pay represents the consensus of opinion among experts in the trade, as to the probable condition in the cotton world next November.

Your cotton spinner, however, knows that at best that guess is liable to be a long way mistaken. A damaging storm over the cotton belt may force the price far up or an exceptionally huge crop may force it down. The spinner doesn't want to take the chances of a loss and isn't playing for the chance of a profit, except the legitimate profit of his manufacturing operation. So he "hedges"—that is, on the day he

buys that ten thousand bales for November delivery he goes on the market and sells ten thousand bales for the same delivery. If he makes a speculative profit on one transaction, it is cancelled by the loss on the other; if he makes a speculative loss on one, it is made up by the profit on the other. In one case he expects actual delivery; in the other, not.

This is the transaction which the friends of the cotton exchange present as the justification for the institution. They say it steadies the market and guarantees the manufacturer against heavy losses. That is true, but the pneumatic cushion on which the manufacturer is able to light is necessarily a speculative one.

Dealing in other futures, on wheat, provisions, etc., is very similar.

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WITHOUT doubt there is a great and growing prejudice against trading in futures. It is popularly believed that "gambling" helps make living prices very high. There are, indeed, some farmers—a good many of them, too—who believe the dealings in futures tend to keep the prices of farm products higher than they would otherwise go. On the whole, however, agricultural opinion is decidedly against the deals in futures; and nobody can follow the testimony that has been elicited during the hearings on these anti-futures bills without being pretty thoroughly convinced that there is crying need, in the interest of the whole public and the fabric of legitimate business, of strict conditioning of these transactions.

The bill which Representative Scott has introduced provides that the mails, the telegraph and the telephone lines shall not be used in connection with transactions in futures. Newspapers, etc., containing records of transactions of the kind shall be denied the use of the mails. Mr. Scott believes it is constitutional, and some excellent lawyers have declared on both sides. Several other bills to attain the same end have been introduced.

The Committee on Agriculture has set about diligently to learn the facts. The officers of the cotton exchanges of New York and New Orleans have been heard at great length, in opposition to the bills. The New England cotton spinners seem about equally divided, for and against the legislation. The Southern spinners are largely in favor of it. The most aggressive influence in favor of such legislation is the Farmers' Union, a national society with chapters in twenty-eight states and an immense membership especially in the cotton states. The organization is maintaining a committee in Washington this winter to press the legislation. The vast majority of cotton-raisers favor the proposed legislation; apparently a comfortable preponderance of the cotton-manufacturing interests are for it, with most of the millers and bakers, who claim it would steady their business.

The millers, indeed, declare that no product could ever be "cornered" if it were not for the system of dealing on margins, which is common in all the other grain exchanges. They deny that there is any benefit in "hedging," and finally they declare that the volume of purely gambling transactions is so much bigger than the total of legitimate dealings that the latter are submerged in the speculative tide and not permitted to be conducted on their merits. The vice-president of the New York Cotton Exchange, A. R. Marsh, told the committee that no record was kept of the total volume of cotton transactions on his exchange.

Being pressed for some estimates, Mr. Marsh gave figures from which the committeemen figured that the entire cotton crop of the world is sold five times over, every year, on the New York Exchange alone. Taking in the other cotton exchanges, Chairman Scott concluded that the sales on the exchanges amount to ten or fifteen times the total amount of cotton produced. Of course, some physical cotton may be sold and delivered more than once; but the testimony is that most of it is sold only once through the exchange. So it

would appear that from one fifteenth to one tenth of the cotton deals are in cotton, and the rest are in blue sky. The committee leans to the opinion that it's too much sky and too little cotton.

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WHILE Mr. Marsh was on the stand, Representative Burleson, of Texas, one of the strong advocates of anti-futures legislation, made a point that nobody succeeded in meeting and parrying effectively.

"The wool and the cotton markets are much alike," said Mr. Burleson. "Why is it necessary to maintain a great cotton exchange which had dealings amounting to fifteen times the actual amount of cotton, while there is no wool exchange and no demand or apparent need for one?"

Mr. Marsh was of the opinion that there would be a wool exchange if the hazards of the business—the uncertainty even among experts, of how a given lot of wool would turn out when its grease was scoured out of it—were not so great as to make exchange dealings almost impossible.

"Then," suggested Mr. Burleson, "there is more hazard in it than in cotton?"

"Vastly more; the wool-dealer expects a margin of about twenty per cent in his trades, in order to be secure; the cotton-dealer is content with one half to three fourths of one per cent."

"Then," said Mr. Burleson, "I should think there would be just that much more need for a wool exchange, so that people buying wool could somehow get the advantages of this system of 'hedging' which the cotton-exchange people present as their chief justification for existence."

Mr. Marsh didn't get past that point. Nobody else did.

"Now, Mr. Marsh," persisted Burleson, "isn't it a fact that a wool exchange was undertaken in New York and that it failed, and that the failure was well known to be because the cotton exchange provided all the gambling facilities of that kind that the gambling fraternity seemed to require?"

Mr. Marsh didn't believe that was so; and then Mr. Burleson presented a lot of testimony from financial New York to show that it was the case.

Then Mr. Burleson followed up his argument by reading testimony of J. R. McColl, one of the greatest cotton manufacturers in the world. Mr. McColl, who is strongly opposed to the cotton exchanges, declared that the wool, silk and many other commodities fairly comparable to cotton are handled for all the world without intervention of exchanges, and that in those lines there is not the same dangerous speculative condition that constantly makes cotton so hazardous, even to the man who does the most conservative business.

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THUS the investigation has gone on for weeks now.

By the time it is finished, the reports of the hearings will make a volume of many hundreds of pages. There will not be a large supply of the printed copies, but Congress will get them printed if there is demand for them. Anybody interested in the subject—and every farmer ought to be interested—should write to Chairman Scott or to his own member of Congress, asking for a copy of the report. It is well worth study. There is small chance that, even if it gets out of the House committee and passes the House, the measure will get through the Senate this session. It will be a long hard fight, and one in which the farmers must make themselves felt, before such legislation will pass.

"What we need," said Mr. Scott a day or two ago, "is a plan that will make it possible to retain the good, but cast out the bad features of the trading in futures. If we could pick out the legitimate and often very necessary transactions in actual cotton, grain, etc., and protect the right to continue them so long as they are legitimate, I believe the exchanges might serve a useful purpose. But as there is plainly no way now in sight for making such a separation, and as the people interested in the dealings are themselves apparently unable to help us to devise such a plan, I think the demand for the discontinuance of the whole business is certain to be pushed till legislation is passed."

This is the general opinion of those who have studied the subject. But not without persistent and strong pressure from the people will such results be secured.



# Spring Care of House Plants

## Getting Them Ready to Plant Outdoors

By Samuel Armstrong Hamilton

Photographs by Frank Cremer



LAST spring I told you about the method of spring handling of hardy shrubs and bulbs. In this article I shall set forth the plans for preparing house plants for outdoors, a subject which should be of special interest and help to the amateur gardener. None but those who keep in touch with what the specialists are doing know of the many beautiful things which have been introduced this season by the first-class seeds-men and plants-men. It is a pity that so many persons keep old house plants over the one season, as young plants are so much the finer, and it is so easy to grow fresh ones each season; but there seems to be a sentiment about it which must be respected, because it cannot be eradicated, so I will take conditions as I find them.

You probably have some of the following house plants on hand which have been blooming during the winter. They may be a dozen years old. Or they may be "resting" in the dark cellar over winter: Begonia, geranium, lantana, hydrangea, petunia, verbenas, heliotrope, fuchsia and similar plants. If so, put them on the "dry side" (which means let the soil become almost dry, but not quite) for two weeks and then cut them back from one half to two thirds. Do not mind if they drop their leaves. We are simply going to rest them and give them a fresh start. De-pot them, and if there are signs of worms in the pot, which can be told by the presence of worm-burrows in the soil, give the pots a drenching with lime-water, when the first water is given. To make the lime-water, dissolve five pounds of lime in two gallons of water and, when slaked, stir well, and allow to settle. Use the clear solution from the top. This will kill all kinds of soil-worms, and it should be used often in the pots of plants, as the worms feed on the fibrous feeding-roots of the plants.

At the end of two weeks examine all the pots by de-potting them, and those which have been filled with roots should be shifted to a pot just one size larger—not more. Then water and set in the light, but not in the sun, and gradually inure them to the sunshine, and they will soon be in full foliage. However, as some shoots tend to grow faster than their fellows, such should be cut back to the general length, in order to make symmetrical plants.

These plants are intended for next winter's blooming, and should be grown slow and stocky during the summer. They will do right if given sunshine in the morning and partial shade in the afternoon. The pots should be sunk in the soil to the brim, and no watering done except the rains, unless there is a prolonged drought. At intervals of three weeks cut out the leading shoots, and keep them short, round and low down, for the best blooming effect. The aim is to get as many blooming spurs as possible, as, next winter, each one should throw up at least one bloom-spike.

By the time this article appears, in March, it will be time to start the early asters, gladioli, dahlias and cannas, especially if intended for the mid-summer flower-carnivals, which are so popular in many sections of the country. The one thing which has operated against the use of early bedding-out plants, among those of moderate means, was the expense for pots, but it is not necessary to use them for the above-named plants for propagating purposes. For the gladioli, dahlias and cannas, use the quart-size strawberry-baskets which are very cheap, and some of which are on hand in every family. These will need no drainage, as they are loosely constructed. Put the roots in these, cover with the soil you have laid in for this purpose and set in a room with a temperature of not less than fifty degrees at night, nor more than seventy-five degrees in daytime, and water when the top of the soil is dry—only—and then do it thoroughly. When the plants are ready to set out, just as soon as danger from frost is past, they will have two months start and will bloom that much sooner. When transplanting from the berry-baskets, with a sharp knife cut down one side and the basket can be lifted away, and the ball of soil, roots and all, be planted without at all disturbing the plant.

For flowers, such as the aster, phlox, nasturtium, balsam, pansy, chrysanthemum, salvia, tuberous-rooted begonia and many other annuals used for bedding, if it is not desired to go to the expense for pots, use the pint-size ice-cream boxes made of water-proof paper, cutting off the top and lowering the sides to a height of three inches. Fill these with soil, fine, rich and loamy, using enough sand to make it friable. In these plant three or four seeds, and when they have formed their third leaf, cut out all but the best plant and let it grow. These should be set together in a "flat" (a wooden box twelve by

eighteen by two inches) and given the same treatment as outlined above. Before filling the paper boxes with soil, make three holes for drainage in the bottom with a lead-pencil, by pushing it through from the inside.

The calla-lilies, which should have been in bloom for Easter, should now be put on the "dry side," and allowed to remain so for a month, and then given merely enough water to keep them alive. As soon as danger of frost is past, sink the pots in the soil in a sunny location and allow them to remain so until the first of August. Then take them up, lay the pots on their sides in the shade and allow them to get as dry as a bone. Allow them to stay for a month, then repot them in fresh soil from a swamp or in leaf-mold and loam, with a handful of bone-meal on top, and set the pots in an inch of water and keep them

ding out, that they be in bud and bloom, when the proper time comes, and this can be done by the above method, but there must be no check to the young seedlings. They must be kept in an even temperature and a humid atmosphere, and can be held for proper weather conditions by putting them on the dry side and in a temperature of fifty degrees for a period of three weeks, if in the bud state.

The beds for annuals should be dug deep, as most all of this kind of plants are deep rooting. They must grow, perfect their blooms and seed, all in a summer's season, and this requires a rapid and extensive root growth. The best soil obtainable should be given them and not used more than one season, in order to keep in check "rust" and other fungous diseases which affect some of the finest of our plants. Always give a dusting of air-slaked lime before raking the beds, as this renders available stored-up plant-food and corrects any tendency to acidity in the soil.

There are a few things outdoors to be done this month. The wrappings about the young trees, shrubs and bushes should be loosed, but not taken off. The mulch about the roots and that over the crowns of the herbaceous plants should be carefully stirred, to let in air to harden off the roots gradually, and any neglected pruning can still be done, before the sap runs too freely, entirely eliminating all dead wood and removing one of two branches which cross each other.

As soon as the snow disappears, go over the lawn for frozen-out places and at once seed them with pure Kentucky blue-grass, sowing it in the bare places and pressing it into the moist soil. These bare places on the lawn are mostly caused by the dying out of annual grasses, such as the well-known "barn-yard" and "crab-grass," which spread over the lawn to a radius often of a foot, killing the other grass and, when they die during the winter, leaving a bare spot. The best cure for this is prevention, which consists of a periodical search of the lawn or grass-plot, from early spring until the snow comes again, and cutting them off underground.

The lawn should be rolled just as soon as it can be done, which will be when you can walk over it without sinking into the soil. This is the time, also, to edge up the sod along the walks, and where the sod has shrunk away, or died back from the walks, patch them with pieces of sod pounded down. The spring fertilizer for the lawn can be put on top of the snow or as soon as you may safely walk on the grass without leaving footprints. For this purpose use Canadian unleached hard-wood ashes, which are cheap and effective. I do not approve of the use of stable manure on the lawn over winter, on account of the weed-seeds which it contains and the labor required the following season to eradicate them. Grass which is well drained, so that water does not stand on it and freeze into ice, will not freeze out in any portion of North America if it be of perennial varieties, unless the soil is too shallow or poor to enable it to get the requisite root growth. If your lawn, when in full vigor, has a decided yellow cast, instead of the translucent green-blue, which it should have, give it a soaking of muriate of potash, in the proportion of one ounce of the crystals to two gallons of water, which will restore it to its proper color.

For the first two months of the season, if it can be done, roll the lawn once a week, after being cut. This will make finer grass than if allowed to grow loosely. The grass should be cut one and one half inches high until the middle of June, when the cutting-bar should be raised a half-inch until the warm dry weather of July sets in, when it should be set at two and a half inches, for points north of Washington, and three inches for points south of that. This is to give the grass-roots shade and prevent surface drying.

It many times happens that the home gardener is so enthusiastic about the spring flower-bed that the lawn or grass-plot is often neglected. Of course, there is a great fascination about planting flowers and watching them grow, and it is all right to spend a good deal of time on them, but the gardener should be careful not to be so interested in the flowers as to neglect the grass-plot. A bed of flowers may be most beautiful in itself, but it will not look its best if the grass is not green and well cared for. The surroundings for a flower-bed should always be neat and trim in appearance. What could be prettier than a bed of flowers against a background of soft green grass? So when you are planning your garden, read most carefully the above suggestions about the care of the lawn, and I am sure you will be pleased with the results.



A bed of cannas which was started early. They should be in bloom when set out

thus until they bloom. If you have never grown them this way you have a delightful surprise in store—they are a swamp plant.

There are many persons who do not know what to do with their ferns during the summer. Most people keep them in the hothouses, but this is a mistake, especially with the species *Nephrolepis* (various Boston ferns). They should be sunk to the rim of the pots in the soil in the shade outdoors, where they will have a damp situation, unless you are very certain that you will not forget to water them freely. The north side of shrubbery is a good location, also. Cut back all weak and very old fronds, give a feeding of bone-meal, and if not protected from winds, stake the fronds. If the ferns were not repotted last fall, they are likely to need it this spring. If the pots are filled with white, fibrous roots, repot into a size larger. Postpone this until the weather is so far advanced that you can get into the woods to get some pulverized rotten hard wood (oak, ash, linden, birch or beech), and use one third of this, one third of leaf-mold and one third of good garden loam or dessicated sods. To the quantity for each six to ten inch pot, mix a handful of bone-meal.

It is the intention, when growing annuals for bed-



Showing annuals which were started early and which by June were in bloom





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# Our Puzzle School

Conducted by Sam Loyd

## The Lost Cent

HERE is a puzzle known as the Covent Garden Problem, which appeared in London half a century ago, accompanied by the somewhat surprising assertion that it had mystified the best mathematicians of England. The problem is continually cropping up, in some form or other, generally accompanied by that same statement of its having baffled the European mathematicians, all of which must be taken with a liberal allowance of salt, as our Yankee scholars would find such little difficulty in dispelling the mystery that I can only feel justified in presenting it as a special practice problem for our more juvenile puzzlists. As some of the other puzzles have proven to be too difficult for many beginners who have become interested in such matters, I have determined to act upon an oft-repeated suggestion from our younger

## THE LOST CENT



friends to present a few simple problems of a mathematical nature which all should be able to solve.

Well, to get back to the Covent Garden Problem, which I had almost forgotten. It is told that two huckster ladies were selling apples at the market, when Mrs. Smith, for some reason or other which must be the real mystery which has baffled the mathematicians, was called away and asked Mrs. Jones, the other apple lady, to dispose of her stock for her.

Now, it appears that they each had an equal number of apples, but Mrs. Jones had larger fruit and was selling hers at the rate of two for a penny, while Mrs. Smith sold three of hers for a penny. Upon accepting the responsibility of disposing of her friend's stock, Mrs. Jones, wishing to be very impartial, mixed them all together and sold them off at the rate of five apples for two pence.

When Mrs. Smith returned the next day, the apples had all been disposed of, but when they came to divide the proceeds they found that they were just seven pence short, and it is this shortage in the apple or financial market which has disturbed the mathematical equilibrium for such a long period.

Supposing that they divided the money equally, each taking one half, the problem is to tell just how much money Mrs. Jones lost by the unfortunate partnership.

## A Rebus

A term for scolding, backwards read. Will give what all good people dread; A character so base, that none The epithet would call their own.

## Brain Sharpeners

Why are washerwomen great travelers? Because they are continually crossing the line and running from pole to pole.

What is the largest room in the world? The room for improvement.

Why is a street-car like the heart of a coquette? Because there is always room for one more to be taken in.

When may a man be said to breakfast before he gets up? When he takes a roll in bed.

Why are teeth like verbs? Because they are regular, irregular and defective. What is it that a gentleman has not, never can have and yet can give to a lady? A husband.

Why is a man just imprisoned like a boat full of water? Because he requires bailing out.

Why are fowls the most economical things a farmer can keep? Because for every grain they give a peck.

## Evolution Puzzles

Nothing produces more fun and amusement for an evening party than the simple game of "Evolution," wherein you are to change one word into another, changing one letter at a time, always spelling correct dictionary words.

Thus, to transform pig to rat in three moves, we might proceed as follows: Pig, pit, pat, rat, or pig, rig, rag, rat.

East to west: East, vast, vest, west.

Dog to cat: Dog, cog, cot, cat.

Soup to fish: Soup, sour, pour, pout, post, past, fast, fist, fish.

Road to rail: Road, goad, goal, coal, coil, toil, tail, rail.

In using the puzzle as a game, the company first agree upon the different pairs of words to be transformed, and then see which player can make all the changes in the fewest moves, the number not being previously specified. Some words take more moves than at first might be supposed. Thus, the reader will, I think, find that rose cannot be changed into lily in fewer than five moves, although shoe may be transformed into boot in three. The latter could not be effected under four moves were it not for the fact that the third letter is the same in each word.

To test your cleverness, transform the following pairs in three moves each: Cat to dog; boy to man; wood to coal; lion to lamb; hate to love.

Transform the following pairs in four moves each: Warm to cold; fish to meat; more to less; fire to cold; ride to walk.

## The Hindoo Flower Trick

Below is an illustration of the famous Hindoo flower trick. The fakir plants a seed in the hat and a beautiful flower at once appears; then he asks you to take the seven pieces and arrange them so as to form a Greek cross.



## Missing-Word Anagram

Here is a clever missing-word puzzle. Use a four-letter word, the same letters each time, in each of the blank spaces, and make good sense of the following rhyme:

A \_\_\_\_\_ old woman on \_\_\_\_\_  
bent  
Put on her \_\_\_\_\_ and away she  
went.  
"\_\_\_\_\_," she cried, as she went on  
her way.  
"How are we going to \_\_\_\_\_ to-day?"

## Answers to Puzzles in January 10th Issue

The numbers should be arranged as follows to add up 15 in eight different directions:

618  
753  
294

To take away eight matches so as to leave but two squares, remove eight black matches so as to leave one small square in the center of the large one.

The charade is: Met a physician.

The cashier gave 5 ones, 50 twos and 19 fives.

In the concealed geography we read the names of Constantinople, Samaria, Thebes, London, Sedan, Tours, Metz, Inkerman, Edinburgh, Bergen, Genoa, Balkan and Berlin.

Many correct answers to all of the puzzles were received and prize puzzle books have been mailed to them for their clever work. Fifty books, containing the finest collection of puzzles ever issued, will be distributed among those sending the best answers to Sam Loyd, Box 826, New York City.

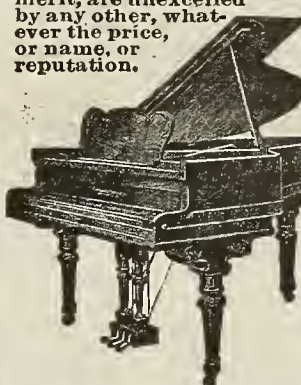
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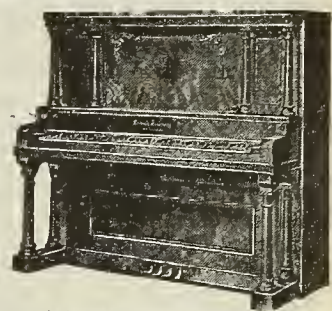
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"For a number of years I suffered with stomach and bowel trouble which kept getting worse until I was very ill most of the time. About four years ago I left off coffee and began taking Postum. My stomach and bowels improved right along, but I was so reduced in flesh and so nervous that the least thing would overcome me.

"Then I changed my food and began using Grape-Nuts in addition to Postum. I lived on these two principally for about four months. Day by day I gained in flesh and strength until now the nervous trouble has entirely disappeared and I feel that I owe my life and health to Postum and Grape-Nuts.

"Husband is 73 years old and he was troubled, for a long time, with occasional cramps, and slept badly. Finally I prevailed upon him to leave off coffee and take Postum. He had stood out for a long time, but after he tried Postum for a few days he found that he could sleep and that his cramps disappeared. He was satisfied and has never gone back to coffee.

"I have a brother in California who has been using Postum for several years; his whole family use it also because they have had such good results from it."

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## CHANGE THE VIBRATION

## It Makes for Health

A man tried leaving off meat, potatoes, coffee, and etc., and adopted a breakfast of fruit, Grape-Nuts with cream, some crisp toast and a cup of Postum.

His health began to improve at once for the reason that a meat eater will reach a place once in a while where his system seems to become clogged and the machinery doesn't work smoothly.

A change of this kind puts aside food of low nutritive value and takes up food and drink of the highest value, already partly digested and capable of being quickly changed into good, rich blood and strong tissue.

A most valuable feature of Grape-Nuts is the natural phosphate of potash grown in the grains from which it is made. This is the element which transforms albumen in the body into the soft gray substance which fills brain and nerve centers.

A few days' use of Grape-Nuts will give one a degree of nervous strength well worth the trial.

Look in pkgs. for the little book, "The Road to Wellville." "There's a Reason."

# A Substitute for Ruth

## A Two-Part Story by Elliott Flower

Illustrated by H. Haygarth Leonard

## Chapter III.



ONE missed Molly until dinner-time—they had noon dinners at the Conovers'—and even then her absence occasioned no particular anxiety. The neighbors' children, with whom she occasionally played, lived some distance away, and Molly herself was not noted for her punctuality. Mr. Conover merely asked perfunctorily where she was, and Mrs. Conover replied that she had not seen her since breakfast.

Both were thinking of other things. There was Ruth in open rebellion up-stairs and a lack of harmony with regard to the case down-stairs. Ruth had defiantly refused to promise that she would not see or correspond with Bertram Winfield again. Mr. Conover had taken prompt measures to enforce his autocratic decree of separation and Mrs. Conover wavered between the two. Mrs. Conover could not uphold defiance of paternal authority, but neither could she see why Mr. Conover should be so uncompromisingly hostile to Bertram. The fact that Bertram's father and her husband had had serious business and personal differences seemed to her no sufficient reason for visiting punishment upon Bertram and Ruth, especially when there was nothing upon which to base an objection to Bertram personally.

So there was a coldness between Mr. and Mrs. Conover that kept their minds pretty steadily on the cause of it. Mrs. Conover did not approve of the imprisonment of Ruth, but Mr. Conover had had his way in that. On the other hand, Mr. Conover wished to settle the affair by banishing Ruth to his brother's ranch in Montana or some other lonely and remote spot, but Mrs. Conover had objected so strenuously that he had not deemed it wise to insist. The situation, therefore, was unsatisfactory to both.

By the middle of the afternoon, however, Mrs. Conover's thoughts had shifted from Ruth to Molly, and she resorted to the telephone in an effort to locate the missing child. None of the neighbors had seen her. Mrs. Conover began to be seriously alarmed. She questioned the servants, and from one of them learned that Molly had started off in the direction of town immediately after breakfast. Inquiries made by telephone of friends in town brought no news, however.

Then Mrs. Conover, excited and anxious, went to Mr. Conover, quite forgetting the lack of harmony between them.

"Molly is lost!" she announced. "We must all turn out to hunt for her!"

Thereupon the problem of Ruth was forgotten by Mr. Conover, also, and his whole attention was given to the problem of Molly. The first problem might separate them temporarily, but the second brought them together again. Mrs. Conover told him all that she knew of the circumstances. Molly had started in the direction of town, but it seemed most unlikely that she would really go to town without first asking permission. The most plausible explanation was that she had gone into the woods, that skirted the road, after wild flowers and had met with some accident.

Mr. Conover hastened to the woods, leaving orders for all available men and women about the place to follow him. Mrs. Conover pursued her inquiries by telephone, calling up everybody in the vicinity in the hope that some one might have seen Molly. Failing to get any news, she then went to Ruth's room. Molly and Ruth had been surprisingly chummy, considering the difference in their ages, and it was possible that Ruth might be able to shed some light on her sister's disappearance. But Ruth, it will be remembered, had not seen Bertram's last note, did not know that he had gone to Chicago and would never have suspected that Molly had followed him there, anyway, so she could give no information of value.

"Molly lost!" she cried. "Dear little Molly! Oh, mother, let me go out with the rest and hunt for her! I can't bear to stay here and do nothing."

"I'm afraid your father—"

"I'll promise anything," pleaded Ruth. "I won't see Bertram, I won't write to him, I won't do anything but hunt for Molly, and I'll come right back to my room the moment she is found. Please, please, mother!"

Mrs. Conover nodded toward the door. "Go ahead," she said. "There can't be too many."

She herself, however, dared not leave the house. Some one should be there if Molly came back; some one should be there if news came by telephone; and all the others were out searching.

Mr. Conover returned early in the evening, merely to see whether any word had come to the house. Neighbors had joined in the search, he said, and the whole country was being scoured, but there was no sign of Molly.

"Ruth is almost frantic over it," he added thoughtfully. "She told me what she promised you. Ruth has a good heart, and I don't see why she wants to give it to the wrong man."

"Perhaps he isn't the wrong man," suggested Mrs. Conover.

Mr. Conover made no reply. It was Molly upon whom his thoughts were centered now, and he was turning back to the search when a boy on a bicycle came up the drive to the house.

"Telegram," said the boy, dismounting.

Mr. Conover almost snatched it from him in his haste. It was brief, being merely "Don't worry" and signed "Molly." Mr. and Mrs. Conover looked at each other in amazement.

"Chicago date," commented Mr. Conover. "How in the world did she get there?"

"And what is she doing there?" added Mrs. Conover.

The first question was answered almost immediately. The telephone-bell rang, and Mr. Conover, answering, found the station agent at the other end of the line.

"Just heard that you were looking for your daughter Molly," said the agent. "She bought a ticket for Chicago and took the 9:10 train this morning."

"Who was with her?" asked Mr. Conover.

"No one," was the reply, "but she seemed to know what she wanted and what she was doing."

There was relief in the knowledge that no accident had befallen the child, but the affair was still enveloped in mystery.

"I've got to get in communication with the Chicago police," announced Mr. Conover. "I'll call off the searchers on the way to town."

## Chapter IV.

MR. CONOVER was up most of the night, hoping for more definite news. He had reached the Chicago police through the local police by long-distance telephone and, by their advice, had abandoned his plan of leaving for the city at once. They would telegraph him, they said, the moment they obtained any clew to her whereabouts, and, until then, there was nothing that he could do. But no message came during the night.

"Where's Ruth?" he asked suddenly at breakfast the next morning.

"She returned to her room as soon as the search was abandoned," answered Mrs. Conover. "She had promised, you know."

He nodded. The absence of one daughter brought the other, even in her rebellion, a little closer, and Mrs. Conover thought she detected signs of weakening, but he said no more on the subject.

"If the mail brings us no word from Molly this morning," he announced a little later, "I shall go to Chicago myself. I may be able to do nothing, but it will be some comfort to be trying to do something."

The mail brought no word from Molly, but it brought word of Molly. This was contained in a personal, heavily marked with pencil, in a Chicago daily paper. The paper was addressed to John B. Conover, and the personal read:

"J. B. C.—M. safe, but will be returned only on payment of reward. Answer in personal column if willing to pay. X."

"I'll pay no reward!" declared Mr. Conover.

"Yes, you will, John," said Mrs. Conover quietly.

"It's paying rewards that encourages these scoundrels!" he expostulated. "The police are bitterly opposed to it."

"It's very easy to be opposed to it when it's somebody else's child," returned Mrs. Conover, "but Molly is ours."

"I'll offer a reward," asserted Mr. Conover, "but I'll see that these villains are nabbed when they try to claim it."

"No, you won't, John," said Mrs. Conover. "Let the law and the police take care of themselves. We're not going to jeopardize our daughter for either of them."

[CONCLUDED ON PAGE 36]



"She read it with many exclamations of astonishment"



# The Feather-Bed

By Eugene Wood, Author of "Back Home," Etc.



As reputation paints him

THE goose is a noble animal. He has four legs. Hold on a second. That's wrong. That's the way to commence a composition on the horse. I'll have to start over again.

The goose is an ignoble animal. It is too useful to be noble. It takes a bad-smelling robber like the eagle or the lion to be really respected and looked up to. All friends of man get a bad name from associating with him. The more completely any living creature coöperates with man for human welfare (this also includes the women folks) the less credit for intelligence. The only exception is the horse, as when we speak of "horse sense." But that exception is but an apparent one, for "horse" means "strong" or "rough," as in the expressions: "Horse-radish," "horse-play," "horse-mint," "horse-chestnut."

The goose gets it a little the worst of all, for while other domestic creatures have complimentary attributes, as "strong as an ox," to call any one a goose is a short way of saying "a perfect fool." I don't think that is quite fair. I am not personally acquainted with many geese, but all I ever heard of them that didn't seem real bright is their habit of ducking their heads when they go under anything, even the lintel of a barn door, which could hardly bump their nog-gins. Yet that's a virtue we might all copy, literally as well as figuratively. Lots of times holding our heads too high has given us a bump that we could well do without. And before we make too much fun of geese for not being able to gage the height of a door, we should reflect that geese should not be faulted for what is not their fault. We human beings are the only animals whose two eyes coöperate for vision. We look at an object with right eye and with left eye simultaneously. That gives us an angle on it by which we can estimate distance. Our eyes operate on precisely the principle of a range-finder on a war-ship. If there is any blaming to be done for the failure of the goose's eyes to look at an object simultaneously, blame the Almighty, who made the goose. Tell Him how much better you could have done His work.

Anyhow, the goose has all the sense it needs in its business. And that is more than some men can say. I don't mean you particularly. Still, if the cap fits, why—

Also, if the goose is such an awful fool, how comes it that the race of geese habitually practise as clever a swindle as you can find in the whole realm of animated nature? A goose is not bad eating, so I am told, though I prefer a plump young pullet any day, and many people find that goose-eggs just about fit them. Let us suppose that on some fine spring day some eight or ten thousand years ago when you were younger than you are now and hadn't much of anything on but some blue paint, you were poking around in the brush in hopes of finding something to eat. And suppose that in the dim light of the underbrush you saw something slim and snaky dart out and strike at your legs, hissing like an adder, I ask you if you do not think you would go away from there in something of a hurry? Because, you know, a snake in the bushes can get at your bare legs before you can get at it. And if it gets there first, you all swell up and die, remember, for whisky has not yet been invented. I betray no confidence when I assert that you would move out of the shrubbery in about two shakes of a lamb's tail. Now I maintain that geese, which can get themselves up to look like adders and can hiss like adders, and which do so for the purpose of hatching out goslings undisturbed by prying intruders, are slandered when they are called fools.

But it is not to celebrate the goose's wisdom that I take my type-writer in hand to drop you these few lines. To my notion the crowning glory of the goose is her plumage. This is not mere professional interest, either. I am aware that the goose-quill is what my friend Mat King would call the "syblem" of my trade. When an artist wants to picture literature he gets out his scrap-book and hunts for a cut of a feather cut off at the plume and whittled to a point at the quill, just as when he illustrates industry he hunts up another cut of a straw skep with bees flying about it, when he means labor he hunts up another picture of a man with a square paper cap on, and when he means the ballot-box, that palladium of our liberties by which we decide which of two men shall draw big wages for fixing it so that what we sell, we sell cheap and what we buy, we buy dear—when he sets out to show us that priceless boon he hunts up a cut of a glass globe framed in between two thin boards with four little spindles, one at each corner. He hunts up the cuts, I say, because he cannot go and draw these objects from life, so to speak. They don't exist. I don't believe that kind of a ballot-box ever did exist. I have heard tell of straw bee-skeps; I once saw a machinist wear a paper cap, and I have seen quill pens, although I never had one in my fingers. I make

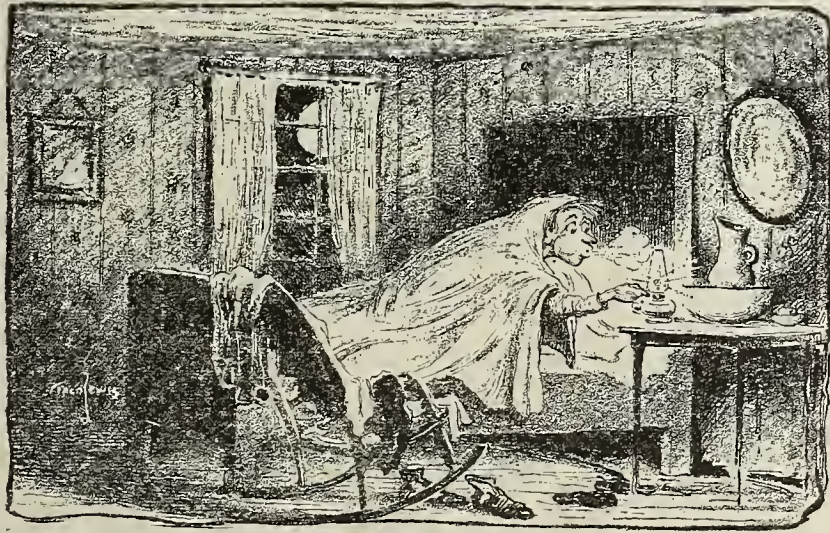
no doubt, though, that there are old codgers frisking around the country as spry as grasshoppers who can mind the time when there were no others than quill pens, who can recollect what a fine joke was that conundrum about Joseph Gillott, and why was he the wickedest man on earth? "Because he makes people steel pens and then tells them they do write." Maybe these old codgers taught school, and the prettier a girl pupil was, the more trouble she had getting her pen mended just to her liking, as she stood by the teacher's desk. But nowadays—why, nowadays, we have to stop and think why a pocket-knife should be called a "pen-knife."

No. I am not thinking of the goose as the source of letters, but as the fount of feather-beds. If it weren't such hard work and such poor pay, I'd write a piece of poetry about the feather-bed. You might think it was only a comical subject, but if you'll just lay this paper down in your lap a minute or two and lean back in your chair, and kind of look away off yonder some place without seeing anything, and let your mind wander where it will, you will see that a place in which at least a third of our lives is spent must be the setting for much human drama; of the twin altars of the home, "bed and board," bed comes before table in order of importance; it is the gateway into this present life and out of it into—what? Around the bed, as planets around the sun, circle holy, sacred and blessed memories. And if a picture comes before our mind's eye, whether of Wesley murmuring: "The best of all is, God is with us," or of the martyred Lincoln propped up on high pillows, forget not that it was on a feather-bed these dying heroes gently breathed their lives away.

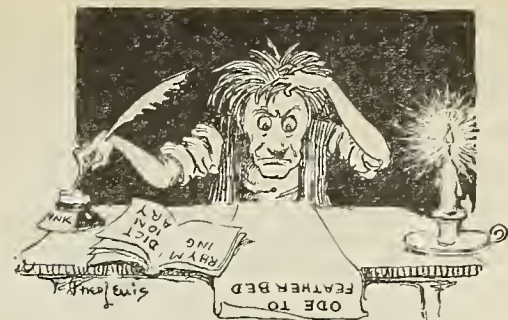
While I cannot recollect writing with a goose-quill, I will not boast myself of such green youth that I would not know a feather-bed if I saw one walking down Main Street. It is true that there is a faint memory of sleeping on one—or trying to—on a hot August night when the coolest hour never went below eighty-eight Fahrenheit, but that was because grandma was getting old and forgetful, and didn't think to put the straw-tick underneath and the feather-tick on top. The straw-tick was all bulgy and rustling with the clean straw, you recollect. It had a kind of a placket-hole, through which to reach in and stir up the straw from time to time. Folks that put on style buttoned up the placket-hole with large round wooden buttons, but I've never slept on such. At least I didn't remember having done so, and I should think those big round buttons would have made some kind of an impression on me if I had. Sleeping on a feather-bed sort of connotes (as high-browed writers say) snapping cold weather, say along about the middle of January when there has been good sleighing for six weeks steady and the mercury in the thermometer cuddles down into a shiny ball at the bottom of the tube with just a little short silvery splinter sticking up from it.

A feather-bed to sleep on brings up the picture of a low-eiled room up-stairs, the spare bedroom of a house out in the country. It has striped paper on the walls, with tiny sprigs of roses in the stripes. You enter and shut the door to after you. (I think the door has a thumb-latch on it.) The still and tomb-like cold begins to press upon you, as it were, soaking through layer after layer of your warm clothing and leaking down the hollow of your back as if you had been immersed in a bath. The Nottingham lace curtains hang in stark and rigid folds as if they had been frozen stiff. The twelve-paned window flashes with feathery frost-flowers. The looking-glass is dulled here and there with some last breaths of moisture caught and held like features of a likeness upon the silvered plate of an old-fashioned daguerreotype. Even the flame of your little glass hand-lamp (there is a strip of red flannel in the bowl of it to keep the "coal-oil" from exploding) cannot chase the cloudiness from the neck

of the glass chimney. Your breath expires in steamy gusts. Your eye takes in the wash-stand with its bowl and pitcher, empty, of course, for with water in it the long slim egg shape of ironstone china would crack like a cannon in the dead vast and middle of the night. You observe the towel, so new and stiff and slick that to wipe your face and hands with it were like wiping them with a frozen fish. You observe the soap-dish with its cake of toilet-soap of the shape and size and solubility of a door-knob, scented with—let's see. What was it scented with? Not polecat, but something equally insistent.



"The spare bedroom"



"If it weren't such hard work and poor pay"

It was a stylish room, this spare bedroom, and had a eroeheted rig-a-ma-jig extended in frosty splendor on the back of the rocking-chair, but it made you shudder to think of changing from the cushioned seat and trying to warm that glossy varnish and the airy openness of its eane weave. You did not look around as much as the treasures of the room warranted. You had something else to do at which you did not dawdle. Your ever-stiffening fingers worked with ever-accelerating haste at the task of more and more exposing your tender flesh to the ascetic rigors of an icy but dry shower-bath. And when you turned the bed-clothes back you rudely snatched away the crackling pillow-shams, you ripped off the elegantly tufted white spread with never a thought for all its patient handiwork, and the blue-and-white woolen comforter, all heedless of its artistic weave, the quilts, the blankets, the layer upon layer of warmth-traps—you tore them back with frantic hurry, skated with your bare feet over the glassy rag carpet, puffed out the light and then made a wild leap into the— WEEE! OW-OO!

Ooooo! Bbbbbb! How co-co-co-COLD! Sh-sh! OO-hoo-hoo-oo-oo! Jjjjjjjj! Makes your teessh ch-ch-ch-chatter. Hoo-oo-OOoo! How eo-co-co-co-COLD! It struck right to your very "victuals," as Mat King would say.

I have known guilty wretches hop into bed wearing their underclothing. I have known low trash to sleep with blankets next them instead of between the gelid sheets. I have known feeble compromisers to keep their socks on and shed them afterward. I have even known conscienceless ones to wait to say their prayers until after they got covered up and thawed out a little, which is not the right way to do. But however the shock of this icy plunge, the invariable experience was that the genial warmth that the goose-plumage caught and kept spread like civilization in a new land so that your feet could extend little by little out into the frozen frontier without your fearing that they would freeze so solid that your toes would break off. When you could extend at full length in the billowy bed, and thought how happy and comfortable you were, you suddenly lost track of things and never recovered it until the house began to get all stunk up with coffee and buckwheat-cakes and smoked sausages. The sense of smell does not reside in the tip of the nose, red as a cranberry, but far within where it is as nice and cozy as your body. You could quote with entire approval that noble quatrain in which the poet so excellently sings:

My willing soul would ever stay  
In such a frame as this,  
Ti-rumpty-oodle-toi-de-ray  
(I forget the right words.)  
And everlasting bliss.

But ah, my friends, nothing endures. There is no pleasure however innocent it be but it must pass, and in its passing wring from us a pang that compensates for all the joy. It may be that as a visitor at grandma's there were no duties that compelled your early rising, but in the midst of every Eden is that which must drive out the occupants. As you lay there lapped in luxury there was that also in your midst that forced you willy-nilly to exchange goose-feathers for goose-flesh. It gnawed and gnawed with sharper tooth than any guilty conscience, and every aroma from the kitchen, every cheerful clink of dishes made its gnawing that much worse until you chose the chance of freezing to death in preference to the certainty of starving to death.

They say it is most invigorating to take a cold bath of mornings, to hop right out of the warm bed into a bath-tub full of the water just as it runs, and hop right out again (I believe that part of it), but when there has been sleighing for six weeks steady and the mercury in the thermometer cuddles down into a globule at the tube's end with only a silvery splinter sticking up and you suggest a cold bath—

"Lord save us!"  
Says Mrs. Davis.

I don't drink, I don't gamble, I don't smoke to excess (that is, I don't call my smoking excessive), but I have one bad habit that I can't break myself of: I will philosophize. I seem possessed to try to find general principles that will apply to a lot of apparently disconnected instances. It's no use my friends warning me against it. It's a weakness, I know, and it comes out in the most unexpected places.

Now, you wouldn't think that a feather-bed had anything to do with economic determinism. But it has. Economic determinism, as every child knows, is the doctrine that all our institutions, political and social, all our customs, manners, morals, beliefs, ways of thinking, and so on, are formed by the cultural condition of the society in which we live. For example, if we were no further along in civilization than



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were our ancestors when Julius Caesar first got acquainted with them, all the Smith boys would be married equally and impartially to all the Jones girls, and a Smith boy that married into the Robinsons would be run out of town by an outraged public sentiment. Similarly the belief that if you take frequent baths you will "wash your strength away" is to be found in full bloom only where the means of house-heating is an open fireplace with a backlog on andirons. Similarly, also, if no longer the farmer complains that his meadow-grass is all matted down where the long procession of stately geese in single file wavers down to the creek and back again, singing "gonzle-gonzle-gonzle" as they go; if along in May when you go by a place you never hear the excited protests of



"Her nose all screwed up to keep the down out of it"



"Singing 'gonzle-gonzle-gonzle' as they go"

whopping big birds that do not like to be turned over on their backs, their thumping wings pinioned close by the knees of a determined woman with her nose all screwed up to keep the down out of it, and their heads stuffed into a sock because a goose can bite when it wants to; if there are in many and many an attic feather-beds hanging on nails, because they are too good to throw away and yet aren't the style to put on beds, the real reason for the passing of the goose and its curly plumage is not that it is a fool bird that ducks its head as it goes through a barn door, but that society has reached that stage of culture and complex organization which demands that we shall be busy in the winter-time at tasks that call for nimbleness of hand and wit. We can no longer kind of "hole up" for cold weather, venturing away from the fire only long enough to feed the stock. Our houses must be evenly warm throughout, bedrooms and all of summer temperature.

in all our ways of doing things. How's it all coming out? I don't know, but I hope for the best. I don't know where we're going, but we're on our way.

That's certain.



"I don't know where we're going, but we're on our way"

## A Little Nonsense

### A Barking Dog Sometimes Bites

A WESTERN Pennsylvania tax-collector, though afflicted with stuttering, is an old gentleman of uniformly good temper, which apparently no combination of circumstances can ruffle. One morning he was asked into the "settin'-room" by the lady answering his knock, and was immediately beset by a barking dog.

"Don't mind Tip," said the lady, "he's only fooling—he won't bite you."  
"He w-w-won't, w-w-won't he," said the old gentleman triumphantly, "h-h-he's b-b-biting me n-now."—Success Magazine.

### Entirely Different

MIKE and Pat were two Irish friends—and Democrats. One day Mike learned that Pat had turned Socialist. This grieved and troubled Mike, who said: "Pat, I don't understand this socialism. What is it, now?"

"It means dividing up your property equally," said Pat. "Tis this way: If I had two million dollars I'd give you a million and keep a million myself—see?"

"And if you had two farms, Pat, what would you do?"

"I'd divide up, Mike. I'd give you one and I'd keep one."

"And if you had two pigs, Pat, would you share those, too?"

"Now, Mike, you go to thunder! You know I've got two pigs!"—Holland's Magazine.

### Contented

SMALL Charlotte, not yet four years old, was gifted with so vivid an imagination that her mother began to be troubled by her fairy tales and felt it time to talk seriously to her upon the beauty of truthfulness. Not sure of the impression she had made, she closed with the warning that God could not love a child who spoke untruthfully, and would not want her in heaven.

Charlotte considered a moment and then said: "Well, I've been to Chicago once and to the theater twice, and I don't s'pose I can expect to go everywhere."—Harper's Magazine.

### As in Laundries

A CALIFORNIA woman in training a new Chinese servant to wait on the door had her daughter ring the bell and present her card. Next afternoon a friend called and handed her card to the Celestial, who pulled out of his sleeve the card the daughter of the house had presented the afternoon before and carefully compared the two. "Tickee no matchee," he exclaimed, handing back the visitor's card. "No can come in."—Success Magazine.

### If You're Waking, Call Me Early

(After Tennyson, but in no hope of catching up)

IF YOU'RE waking, call me early, call me early, Bridget dear.

There's jam to make, and bread to bake, and the "Ladies' Aid" meets here; I hope I do not ask too much, but I must early rise,

To dust and wash and make the beds, and bake the weekly pies.

I used to think a maid would do these tasks at twenty per,

But I have learned not to expect such menial work of her;

I've learned to be most grateful to have a maid at all,

So if you're waking, Bridget, don't forget that early call.

—L. Case Russell.

### The Father of Him

CENSUS-TAKER—"Give the ages of your five children."

FATHER—"All right. Mary will be thirteen in September—thirteen, yes, that must be right; and John is—John—ahem—he's going on eleven, I guess; then Helen—wait a minute, I never could remember how old she is—but Fred is—Fred is—let me see—and Archie—heavens, man, my wife will be back at half-past five—can't you come again then?"—W. N. Morse.

### Valuable Man

OWNER—"What did you hire that reporter for? He doesn't know his business."

EDITOR—"No; but he knows everybody else's."—Brooklyn Life.

### Too Bad

"WHERE'S your mistress' maid?"

"Up-stairs, sir, arranging madame's hair."

"And madame? Is she with her?"—Lippincott's.



How a Man Feels When He's About to Propose

### Holiday Visitors

AN APPALLING case of deafness was that of an old lady who lived just across the street from the navy yard. On Washington's birthday they fired a salute of twenty-one guns. The old lady was observed to start and listen as the last gun was fired; then, adjusting her cap and smoothing her dress, she exclaimed, "Come in."—Success Magazine.

### Artistic Efforts

MY LITTLE four-year-old niece worked for a long time with a pencil and paper over a portrait of her father. She finally stopped and, after seriously inspecting the likeness, exclaimed in disgust: "Oh, dear! I guess I'll put on a tail and call it a monkey!"—J. B. V.

### Noise

A TUTOR who tooted the flute, Tried to tutor two tooters to toot. Said the two to the tutor, "Is it easier to toot, Or to tutor two tooters to toot?"—Holland's Magazine.

### A Polish Marriage

A POLISH couple came before a justice of the peace to be married. The young man handed him the marriage license, and the pair stood up before him.

"Join hands," said the justice of the peace.

They did so, and the justice looked at the document, which authorized him to unite in matrimony Zacharewicz Perczynski and Leokowarda Jeulinski.

"Ahem!" he said. "Zacha—h'm—h'm—ski do you take this woman," etc.

"Yes, sir," responded the young man.

"Leo—h'm—ah—ski, do you take this man to be," etc.

"Yes, sir," replied the woman.

"Then I pronounce you man and wife," said the justice, glad to find something he could pronounce; "and I heartily congratulate you both on having reduced those two names to one."—Lippincott's Magazine.

### A Little Too Frank

AS A South Jersey country physician was driving through a village, he saw a man amusing a crowd with the antics of his trick dog. The doctor pulled up and said: "My dear man, how do you manage to train your dog that way? I can't teach mine a single trick." The man looked up, with a simple rustic look, and replied: "Well, you see it's this way: You have to know more'n the dog, or you can't learn him nothin'."—Christian Endeavor World.





# Mother's Page



## The Children's Bedroom

I RECALL a number of babies born within the last four years whose parents have been sufficiently wise to adopt certain rules in harmony with hygienic laws, from these there has been little or no variation. A program carefully planned by the family physician and intelligently carried out by the parents has resulted in healthy, happy, normal children.

The children under consideration were both susceptible to severe colds and each winter witnessed a recurrent attack of catarrhal bronchitis. On examining the throat, I found in each case enlarged tonsils and more evidence of congestion than should exist in a normal throat. In the younger child I was strongly suspicious of adenoids as well. I asked to be shown the bedroom in which the children slept, and made careful inquiry concerning just how it was ventilated at night. It was a north room, getting no sunshine whatever, and the windows were so arranged that the mother felt it to be safe to open, a trifle only, the one at a distance from the beds. Asking to what use the south room was being put, I learned that it was an up-stairs living-room. I suggested that a change be made and that the south room be prepared for the children and the north room used as a sitting-room. This met with some opposition, but persistence and the children's welfare finally prevailed.

Always give the children a room with southern exposure, when at all possible, for a south window may be opened wide with little danger of the cold, penetrating winds that are not, in my opinion, without an element of danger for little children, some fresh-air enthusiasts to the contrary notwithstanding. A screen intervening between the window and beds is a wise precaution, warm night-clothing and bedding are imperative in the winter, and Scotch flannel night-gowns or, still better for the younger ones, the night-drawers with feet should be worn.

JEAN WILLIAMS, M.D.

## Amusing the Children

How often when one is busy or tired, or out of sorts generally, a call comes from the children, "Mother, tell us what new to play. We don't know what to do." That is the burden of their song, "We don't know what to do." If you have never heard it, you are indeed blessed—but the time will come, so prepare now to answer it.

The mother who is one with her children is wise, for if mother shows an interest in little Mary's doll and its clothes, little Mary in a few years will show a decided interest in the mysteries of mother's kitchen and the doings therein.

I never hear a mother say, "The children tease me so to play with them, but I can't, I haven't time," that I do not feel like telling that mother she is a very foolish person and that she should be more sympathetic, spend less time talking with Mrs. Jones across the way and make time for her children.

A dear, delightful little woman friend of mine will drop anything she is doing to sit on the floor and play a game of marbles with her boy. In consequence, the boy worships her and she need never fear their becoming estranged. She confided to me, "I join Jack's games now so that he will ask me to join his when he is grown up. And he will, too. Yes, I have thought of The Girl, but there will always be a place in Jack's heart for his chum, as he calls me." And I knew that she was right.

If little Johnny is discovered rapidly demolishing the library-table with a hammer he has brought up from the cellar, it is a sign that he has a natural bent for carpentry. If possible, get him a set of tools and set him to work. You will not hear the plaintive "Mother, I don't know what to do" for a long time.

And if Jennie bothers you when you are baking, do not send the child away, telling her you are too busy to have her around. Get a little bowl and tell her to mix up a little simple cake or biscuit. You have no idea how these little things count in making the child grow to be the right sort of man or woman.

B. A. V.

## When Tea is Harmful

TEA is responsible for many ills, especially among women. While it is the simplest matter in the world to make tea properly, it is unhealthfully prepared more often than otherwise. Tea is absolutely unfit to drink when the brewing process has proceeded beyond a certain point and tannin is liberated, but if care is taken the evils of moderate tea-drinking may be reduced to a minimum. The old rule which calls for a teaspoonful for each person and one for the pot is unthinkable from the standpoint of the modern dietitian. Such a brew is ruinous to skin, stomach and nervous system.

To make tea properly and as nearly as can be hygienically, buy good tea, preferably black. Heat the receptacle, in which the tea is to be made, with hot water, use one teaspoonful or less of tea to a pint of boiling water, allow the water to remain in contact with the leaves five minutes, then pour off and use at once. Never put the tea-pot directly in contact with intense heat. A very safe and satisfactory way of making tea is by the use of the tea-ball, as very little tannin contaminates the beverage thus made. The abuse of tea is common and a fertile source of serious nervous disease. The habit of giving tea and coffee to young children is little short of criminal.

## For the Nursing Mother

IT is necessary to include in the diet of the nursing mother more than the usual amount of fluid. If cow's milk does not disagree in any way, at least a quart a day may be taken. Broths, gruels, weak tea and cocoa also add to the fluid element.

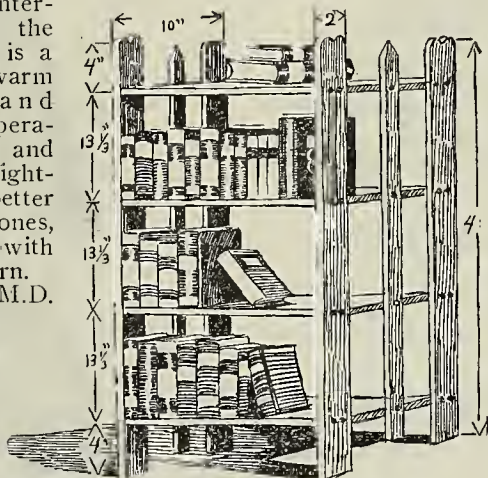
Combined with these in proper amount should be a simple, easily-digested, nutritious diet of meat, eggs, vegetables and fruit. Many people have an erroneous idea that fruits, because of their acidity, do not agree with the baby. On the contrary, if the mother digests the fruit easily and perfectly, the reaction on the baby's bowels is good, preventing in many cases the constipation so common among infants. When a nursing mother finds that certain articles of food cause her distress and evidently disagree with

the baby, she should promptly eliminate them from her bill of fare. In general, the following articles should be avoided: Vinegar, pickles, cloying sweets, cabbage, turnips, cauliflower and onions (if they cause flatulence), rich sauces, greasy foods, heavy boiled puddings, rich pastry and all alcoholic beverages unless prescribed by a careful physician.

## A Home-Made Bookcase

GENERALLY mother's leisure moments for reading are few and far between, but when the opportunity does present itself, she wants her books and papers and magazines where she can easily lay hands on them. While the bookcase above illustrated is not a sumptuous affair, it is a neat, good-looking receptacle for books and is sure to prove a delight to the children as well as to the mother. It can easily be made in three hours at the small cost of forty-five cents. First, take a piece of pine, chestnut, cypress or oak six feet long and eight, nine or ten inches wide, as may be desired, and cut it into four lengths, each a foot and a half long, to serve as shelves. Have the ends perfectly square and the boards of even length. Plane and sand-paper the shelves. Rip an eight-inch board four feet long into four strips, each two inches wide. Plane and sand-paper these strips. Place these strips on the bench side by side, square them up as if they formed one piece. Then measure back four inches from each end and place two dots on each strip to mark where you want the screws. You have now marked where the screws go to hold the top and bottom shelves. Divide the intervening forty inches so as to place the second and third shelves correctly. Prepare two strips an inch wide and forty-four inches long, which are to be placed between the legs at either end. Bore holes in legs and strips for screws. Stain and apply two coats of wax.

G. F. P.



Easy-to-Make Bookcase

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Write for territory today. Biggest seller ever invented. Opportunity to get rich. No experience necessary. Nobody can make money. One man's orders \$2600 one month—profit \$1650. Mere boy in Pa. made \$9.00 in 2 1/2 hrs. "Called at 20 homes, made 19 sales," says A. E. Martin, Mich. "Sold 131 in 2 days. Sold 18 first 4 1/2 hrs." says E. Menn, Wis. So it goes. Hundreds getting rich. Room for you. Abundant money. Pleasant position. All of spare time. Canvassed 11 families took 11 orders," E. Randal, Minn. "Six dozen orders in 4 days," W. R. Hill, Ill. "Most simple, practical, necessary household article I have ever seen," E. W. Melvin, San Francisco. Act quick. Territory going fast. Orders, Orders, Orders. Money, Money, Money. Come on. You can do it, too. Try it. You can make



\$3,000 IN 3 MONTHS

selling this great invention—The Easy Wringer Mop—biggest money maker of the age. Think of it! A Self-wringing Mop. No putting hands in the dirty water. No aching backs. No slopping against woodwork. No soiled clothes. No contracting deadly disease from touching hands in filth and germs that come from floor. Can use scalding water containing strong lye. Two turns of crank wrings out every drop of water. Makes housekeeping a pleasure—makes the day happy. Simple, practical, reliable, durable, it lasts for years. Every woman interested—and buys. No talking necessary—it sells itself. Simply show it and take the order. Could you imagine an easier, quicker, better way to make money than supplying this demand already created.

We want more agents, salesmen, managers, to fill orders, appoint supply, control sub-agents. 150 per cent profit. No investment required. We own patents and give you exclusive territory, protection, co-operation, assistance. You can't fail, because you risk nothing. Act quick. Write for your county today. We Want a Thousand Men and Women.

Send your name and address for information, offer and valuable booklet Free. Write your name and address clearly, giving name of county.

U. S. MOP COMPANY, 918 Main St., LEIPSI, O.



## Here Is Something New From Kalamazoo

Prove for yourself in your own home, that the Kalamazoo is the most perfect—most economical—most satisfactory range for you to use—Your money back if it's not.

Send for Catalog No. 183 with special terms and compare Kalamazoo prices with others

## Cash Or Time Payments

We want every housewife to know the comfort and convenience of a Kalamazoo in her home. You can buy on easy time payments or pay cash if you like. Either way—you save \$10 to \$20 on any stove in the catalog. We make it easy for responsible people to own the best stove or range in the world.

We Pay the Freight

Kalamazoo Stove Co. Kalamazoo, Mich.

A Kalamazoo Direct to You

## FULL SIZE 31 PIECE DINNER SET GIVEN FOR SELLING POST CARDS



This is a Full Size Dinner Set consisting of 31 pieces. Every piece is handsomely decorated with a bunch of violets in natural colors and bordered with pretty design in gold. The decorations are durable and will last forever. The entire set consists of perfect pieces and are selected from our first grade. We give this beautiful Dinner Set for selling only 35 packages of high grade art post cards at 10c per package. Send for the cards today. When sold send us the \$3.50 and the dishes will be sent you promptly. There are positively no more sales to be made for this complete set. We Guarantee satisfaction or refund your money. ALTON WATCH CO., DEPT. 608 CHICAGO.



# Easter Post-Cards

## Your Last Great Chance

### What 25c Will Do

**F**ARM AND FIRESIDE has secured for its readers the most beautiful Easter post-cards ever printed. For the next thirty days you can obtain them in the most extraordinary offers ever made by a farm paper. They are not ordinary post-cards. Every card is printed in fourteen gorgeous colors and gold, and is beautifully and tastefully embossed. Every card contains an elegant picture appropriate to Easter, and a nice sentiment. There are the cutest little chicks and Easter rabbits, handsome flowers and smiling children, and the gayest colored eggs.

**N**EVER did FARM AND FIRESIDE make so magnificent an offer. Never again will you get such a chance as this. Post-cards are even more popular at Easter than at Christmas time. Everybody sends Easter post-cards. FARM AND FIRESIDE's Easter cards are the handsomest post-cards you ever saw. Many thousands of our readers sent for our Christmas post-cards, and they know that our post-cards are even better than we say. Twice as many readers will send for our Easter cards. Send for yours right away before they are all used up.

### Our Big 25c Offer

For only 25 cents we will send you FARM AND FIRESIDE for six months—twelve big numbers—and we will also send you 20 of our beautiful Easter post-cards, all different, carefully packed, postage prepaid. We guarantee that the post-cards will give satisfaction. The subscription will include the Easter number of FARM AND FIRESIDE, the biggest and handsomest issue of FARM AND FIRESIDE ever produced.

#### Another Way to Get 20 Easter Post-Cards

Get each of two friends to give you 25 cents for 20 Easter post-cards and a six-month subscription to FARM AND FIRESIDE, and we will send you, in return for your kindness, 20 Easter post-cards, absolutely without cost. FARM AND FIRESIDE guarantees every set of post-cards to give satisfaction.

### What 50 Cents Will Do

For only 50 cents we will send you FARM AND FIRESIDE for one year—24 big numbers—and we will also send you 40 of our beautiful Easter post-cards, all different, carefully packed, postage prepaid. We guarantee that the post-cards will give satisfaction. The subscription will include the Easter number of FARM AND FIRESIDE, the biggest and handsomest issue of FARM AND FIRESIDE ever produced.

#### Another Way to Get 40 Easter Post-Cards

Get each of two friends to give you 50 cents for 40 Easter post-cards and a year's subscription to FARM AND FIRESIDE, and we will send you, in return for your kindness, 40 Easter post-cards, absolutely without cost. FARM AND FIRESIDE guarantees every set of post-cards to give satisfaction.

### What \$100 Will Do

For only \$1.00 we will send you FARM AND FIRESIDE for three full years—72 big numbers—and we will also send you 50 of our beautiful Easter post-cards, all different, carefully packed, postage prepaid. We guarantee that the post-cards will give satisfaction. The subscription will include the Easter number of FARM AND FIRESIDE, the biggest and handsomest issue of FARM AND FIRESIDE ever produced.

This is the greatest opportunity our readers have ever had to get a fine collection of gorgeous post-cards. This offer will not be repeated. You must send your order before March 30th. Show your friends how to get these post-cards without cost by ordering through you. Cut out or copy attached coupon.

**FARM AND FIRESIDE, Springfield, Ohio**

Farm  
and  
Fireside  
Springfield, O.  
Gentlemen:—  
Inclosed please find  
\$ ..... for which  
send me FARM AND FIRE-  
SIDE for ..... in ad-  
vance. Please send .....  
Easter Post-Cards by return mail  
free of charge, postpaid, to which  
I am entitled.

If sending extra subscribers, use the lines below.

CUT OUT AND MAIL TODAY—NOW



# SUNDAY READING

## The Mastery

By Rev. Charles F. Weeden

Pastor of Harvard Church, Boston

IT BEGINS with yourself. It means the mastery in all situations and on all occasions; whether you live at "village corners" or at the White House. Power in public will depend upon the control you have gained in private life. "Character is what you are in the dark." Master self at home or when alone and the habit is formed which no sudden provocation in the presence of others can disturb. He that ruleth his spirit is greater than he that taketh Gibraltar.

Passion itself is not bad; it is passion gone mad—the trolley-car run wild, the lake that bursts the dam, the fire that sweeps forest and town, the horse that takes the bit—which does the damage. We want power, but we want it controlled. We are fascinated when we see it in action. That is the reason when the train thunders by that the farmer rests at his plow to signal with his hand, and the lads and lassies cheer as they swing their caps and bonnets, and the wife and mother, standing in the doorway of the old homestead, waves her apron, and even the cradled babe kicks and crows. We want passion, we want power, we want action; but we don't expect to hold a "Dan Patch" with hemp string. Do not be discouraged because you have a hot temper. There will ever be annoying and unjust things to arouse our indignation. But don't get angry. Boil, if you must, but don't explode. There is no great virtue, however, in having no explosive power. You can't speed an ocean liner with a canoe paddle.

### We Need to Master the Tongue

Once upon a time there was a king who purposed not to transgress with his mouth. He evidently knew the trouble. We wonder how he succeeded. It is a comfort to think that this king, with his wide dominions and rule over other men, his retinue of servants, his horses and chariots, his purple and fine linen, his beautiful palace and resplendent throne, was yet obliged to learn the control of his tongue, just as common folk do, by mastering his own spirit.

General Grant could keep silent under trial. One of the finest pictures of this great soldier I saw at a veteran's home in Hartford. The general is represented leaning against a tree before his tent in the woods, during that desperate seven-days battle of the wilderness. People were appalled at the carnage and demanded that Grant be removed. The general's rough uniform gave evidence, as Lincoln declared, that Grant was a fighter and could not be spared. But the face of the commander-in-chief was a wonderful study. The haggard countenance, the burning look of the eyes, the lines of thought and anxiety which seemed to cut into the man's soul plainly showed the mighty sorrow which he was bearing without complaint and alone. But over all could be read the grim courage and the will of iron which proclaimed that the man was master!

The practical apostle of the New Testament, writing of the "unruly member," has said that the tongue is set in fire of Hell. When we hear the prating of the world in unkindness or the loud

profanity of men, we believe that James was right. Step on a dog's tail and he yelps—quick as lightning. When the temper is ruffled the impulse leaps to the tongue and the world hears unpleasant, discordant tones. "Out of silence comes thy strength."

### We Need to Master the Body

There are proper desires to be satisfied, but the moment we leave them unrestrained they run riot. I knew of a wise and respected physician who cherished smoking so fondly and to such excess that the habit began to weaken his "nerve." Resolutely he laid his pipe before him with the quiet but firm remark, "I am going to be my own master, not your slave." Begin early to keep the appetites under. Intemperance is not confined to drinking. One is intemperate when higher duties are set aside by infatuation for lesser things.

The mind and will have tremendous influence on the body. A New York contractor tells this incident: "Two of my men were engaged in repairing the conducting rod on the steeple of a church. To accomplish this dangerous job it became necessary for one of the men to stand on the shoulders of his companion. While in this position a sudden gust of wind caused him to spill some of the hot lead, which fell on the hand and arm of his friend. The brave man never flinched. He had the grit to remain motionless while the fire burned into his flesh. He knew that a sudden movement would throw his fellow-workman to the pavement below. He bore the pain rather than risk the life of his comrade." This man was a hero. The will and mind may be developed to rule the body. Get a good education; all you can. Strengthen the mind by study, then broaden it by travel.

### We Need to Master the Heart

This is the hardest of all, because it is the greatest power. Yonder comes a locomotive, rushing, hissing, roaring, down the grade. Behind it is the power to hurl an army from its path. Away down the track the engineer sees a child standing between the rails. In an instant his hand presses that little mechanism, the throttle, and the monster engine, a quivering, panting mass of metal is brought like a whipped spaniel at the feet of the child. So, like the throttle, the heart is small—about the size of your fist—but out of it are the issues of this gigantic force we call life. Set the standard high. The heart of youth, if wisely guided in its likes and dislikes, is not liable, in later years, to go off on the rampage after things beneath its worth. We do not find the skylark choosing the dark flight of the bat, nor the squirrel burrowing in the mud with the turtle.

One word more. What men love masters them. Mastery is strong as incentive is strong. Mastery is great as the end is noble. When the love of men is for supreme things they shall find the true mastery. All desirable possessions in the world are best achieved and governed by an enthusiasm for manhood, immortality and God. Every human life is masterful as it follows Christ.

## Good Thoughts for Sunday

Some people have to have their sunshine warm; others are satisfied just with its being sunshine.—Alice Wellington Rollins.

Those who bring sunshine to the lives of others cannot keep it from themselves.—J. M. Barrie.

It was only a glad "good morning,"  
As she passed along the way;  
But it spread the morning's glory  
Over the fivelong day.

—Carlotta Perry.

Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindnesses and small obligations given habitually are what win and preserve the heart, and secure comfort.—Sir H. Davy.

Talk about happiness! Why, a well beggar has a better time of it than a sick king, any day.—Amber.

For what is a man profited, if he shall gain the whole world, and lose his own soul? Or what shall a man give in exchange for his soul?—Matthew 16:22.

He who walks through life with an even temper and a gentle patience—patient with himself, patient with others, patient with difficulties and crosses—he has an every-day greatness beyond that which is won in battle or chanted in cathedrals.

Happy the man, and happy he alone,  
He who can call to-day his own;  
He who, secure within, can say,  
To-morrow, do thy worst, for I have  
liv'd to-day. —Dryden.



## A Little Farm Well Tilled in Idaho

under irrigation means a happy home, a life of contentment, with sure and profitable returns.

A five or ten acre tract of this land will not only maintain a family in generous comfort, but will lay up a competence for old age, and liberally educate the children. The delightful climate, clear, pure air and beauties of scenery are advantages you should not overlook.

In Montana, Washington and Oregon, too, are many favored localities where the land is cheap now, but rising rapidly in value.

Fruit growing, vegetable raising, dairying, stock farming, grain producing—all make handsome profits—fat bank accounts—wealth. Don't delay too long.

Write tonight for information about the state that interests you and particulars of the very low one-way fares effective March 1st to April 15th, with stopover privilege.

**The Northern Pacific** extends into or through Minnesota, Wisconsin, North Dakota, Montana, Idaho, Washington, Oregon. New, rich territory being opened up by extensions now building. The Homeseeker's Chance!

The Scenic Highway Through the Land of Fortune

**Northern Pacific Railway**

L. J. Bricker, General Immigration Agent  
Dept. 106, St. Paul, Minn.

A. M. CLELAND, General Passenger Agent, St. Paul



## Get a Watch and Fob Without Cost

**Boys:** Here is your chance to obtain a handsome and useful watch, and a fine leather fob with a gilt metal charm engraved with your own initial letter without cost. FARM AND FIRESIDE guarantees you satisfaction.

**DESCRIPTION:** This watch has a handsome nickel case, with open face. It is stem-wind and stem-set, just like other high-priced watches. It has a close-fitted snap back. It is only 3/8 inch in thickness. It is a perfect timekeeper, tested and regulated before leaving the factory. It is engraved front and back, and is a watch of which any one would be proud.

The fob is of handsome genuine black leather with a polished buckle, like illustration, with a rich gilt charm engraved with your own initial.

**MOVEMENT:** Regular 16-size. Lantern pinion (smallest made). American lever escapement, polished spring. Weight, complete, with case, 3 ounces. Quick train, 240 beats to the minute. Short wind, runs 30 to 36 hours with one winding.

Every watch is fully guaranteed by the manufacturers and by FARM AND FIRESIDE.

The manufacturers will make all repairs for a year free, as explained on the guarantee.



## How to Get the Watch

We will send you this elegant watch and fob, without cost, if you get eight friends each to take Farm and Fireside for 8 months at the special price of 25 cents

Just send us your name and address on a post-card or letter, to-day, and say that you want the watch. We will send you by return mail, without any cost to you, a book of 8 coupons, each one of which is good for a special eight-month subscription to FARM AND FIRESIDE. We will also send you a sample of FARM AND FIRESIDE. This outfit will help you a great deal in getting subscrip-

tions quickly. You sell the coupons to your relatives and friends at 25 cents each, send the eight names and \$2.00 to us and we will send you this grand watch by return mail. That is all you have to do, it is easy to sell coupons. Thousands of boys have done it, you can do it in half a day if you try.

Write to us at once.

**FARM AND FIRESIDE, Springfield, Ohio**



## DELIGHTFULLY ENTERTAINING

You'll sit down and really enjoy your MACY FASHION BOOK. Lots of books that cost a dollar wouldn't interest you half as much as MACY'S new, beautifully illustrated, 450 page SPRING AND SUMMER CATALOGUE.

Recall our prediction after you receive your Fashion Book and see if it isn't the most popular book in your home. Everybody will want to read it. You will see the newest styles for WOMEN'S really distinctive and Fashionable Dresses. Correct models in MEN'S Suits and Hats and furnishings and everything for the CHILDREN, all richly designed with the latest touch of the world of fashion.

### ACT INSTANTLY

In sending your NAME and ADDRESS you risk nothing; you don't commit yourself; you merely accept R. H. MACY & CO.'S liberal offer to send you absolutely FREE, one copy of a beautiful, new 450 page Fashion Book with the POSTAGE PREPAID.

Within a few days after you write your Postman will bring you the handsomest Catalogue of the kind you have ever seen. But don't delay; write us at once. Before you turn another page in FARM AND FIRESIDE send MACY'S your NAME and ADDRESS.

#### Sheer White Batiste Waist No. 410

front formed of eight rows of fine tucks arranged between bands of imitation Torchon lace insertion; back has cluster tucks with rows of imitation Torchon lace insertion to harmonize with the front trimming; the sleeves are long, tucked and trimmed with rows of insertion. The waist has a high pin tucked collar which is edged off with a dainty pattern of lace; it buttons down the back. Sizes range from 34 to 44.

Price, 99c Postage 10c



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Remember that any purchases which you make at MACY'S either by mail or personally, at our store, can be returned and your money promptly refunded if you are not entirely pleased with your selection. Send immediately for the FREE Catalogue.

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## Birthday Post-Cards

Would you like to have your birthstone and the appropriate flower of the month in which you were born on a post-card? You can get them without one cent of expense.

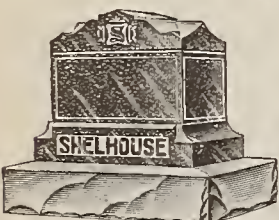
THESE twelve beautiful post-cards, one for every month, have pictured on each one the stone or jewel that should be worn by persons born in that month. The post-card also tells what the jewel signifies. For instance—the January post-card shows a beautiful Garnet in a brooch. It tells that it signifies constancy. Each post-card also shows a special flower for each month, and its meaning. The January post-card also has a bunch of beautiful Purple and Gold Pansies—meaning "thoughts of you." There are twelve post-cards in all, one for each month. All twelve without cost. If you could only see these glorious post-cards! They are rich and fine and sensible, and at the same time gloriously colored in twelve colors on a silver background. Send these cards to friends in their birth months. They are simply fine—words cannot tell their beauty—you must see them yourself.

#### Send To-day for Them

We will send you these beautiful post-cards without cost, if you will send us 10c (silver or stamps) for a three-month subscription to Farm and Fireside. Our only requirement is that the subscription must be for some one who is not now a regular subscriber. Make sure to get these birthstone post-cards and write to-day. Address

**FARM AND FIRESIDE**  
Springfield, Ohio

**\$360 TOMBSTONES \$385.00**  
AND MONUMENTS  
FINE ARTS IN STONE CRAFT  
— DIRECT FROM QUARRY TO CEMETERY —



This Dark Barre Granite Monument for - \$69.95

\$4.90 For this beautiful Marble Tombstone, lettered exactly as illustrated.

More than 500 other kinds, styles and sizes in granite and marble at \$3.60 to \$385.00. If you want the best in stone craft at quarry to cemetery prices, write for our Tombstone Catalog No. 72F38

SEARS, ROEBUCK AND CO., CHICAGO, ILL.



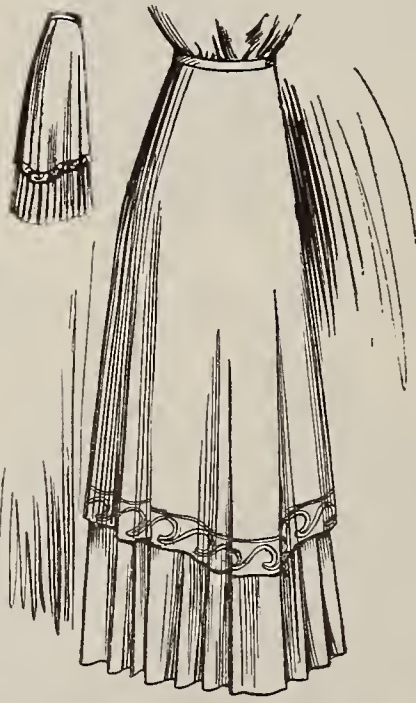
## Madison Square Patterns



No. 1143—Combination Corset-Cover and Petticoat

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, five yards of twenty-two-inch material, or three and one fourth yards of thirty-six-inch material, with five yards of beading, three yards of ruffling and three yards of lace edging

A SEPARATE skirt will be a most useful addition to one's spring wardrobe. There are many times when it will be just the thing for afternoon or evening with a dainty white lawn waist. Draped skirts are much the vogue this spring. One of the most attractive of the new skirts is here illustrated in pattern No. 1383. Unlike most dresses which are very smart, this skirt is most easily made. Even the woman who has had little experience in the dressmaking line will have no trouble in fitting this skirt, for the overskirt is circular, thus doing away with the fitted gores which often trouble even the most experienced dressmakers. Good materials for this skirt would be poplin, light-weight serge or cashmere. A very smart finish can be secured by braiding the border of this overskirt with a narrow soutache braid in the same color as the skirt, or in a darker or lighter tone.



No. 1383—Draped Skirt With Plaiting

Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt all around, 42 inches. Quantity of material required for medium size, or 26 inch waist, five and one half yards of thirty-six-inch material, or four and one fourth yards of forty-four-inch material, with four and one fourth yards of lining thirty-six inches wide for the under skirt

THE busy housewife is always on the lookout for an attractive wrapper. Usually, however, one that is not strictly a wrapper, but one which would make a dainty and useful house gown as well. A gown of this style is shown in pattern No. 1249 illustrated below, from which both wrappers can be made, each possessing many attractive features. One can be quite plain, while a more dressy effect can be secured in the other by finishing the neck with a large sailor collar and the skirt with a deep gathered ruffle. The one illustrated at the left is very like a shirt-waist suit and would be very stylish if made of one of the new percales or ginghams in a dark tone showing a white polka-dot. Such a variety of pretty striped outing flannels are now being shown it will not be difficult to find one suitable for the design illustrated at the right. The collar of this gown would be very pretty finished with



No. 1471—Boy's Blouse Buttoned at Side  
Pattern cut for 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 8 years, two and one fourth yards of twenty-four-inch material, or one and three fourths yards of thirty-six-inch material



No. 1249—Tucked Wrapper With Semi-Fitted Back

Pattern cut for 32, 34, 36 and 40 inch bust measures. The price of all patterns shown on this page is 10 cents each

a border of ribbon in Persian design, with the tie and belt of ribbon in the same shade as the gown.

### The New Catalogue

THE spring catalogue of Madison Square patterns will be out now in a few days and every woman who makes her own clothes should take a look at it. It will keep her posted for a long time to come on the new styles, and for every garment that she sees illustrated in it there is a pattern, the price of which is only ten cents. If you want to be well dressed, order this pattern catalogue at once. If you are accustomed to using the Madison Square patterns and know just how good they are, you will be interested in our latest liberal offer. This offer holds good up to April 1st. We will give one Madison Square pattern for only two yearly subscriptions to FARM AND FIRESIDE at regular price of thirty-five cents each. Your own subscription may be one of the two. We will send FARM AND FIRESIDE one year, new or renewal, and any one pattern for only forty cents. Send orders for the patterns and the pattern catalogue to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.



No. 1451—Shirt-Waist With Side Closing  
Pattern cut for 34, 36, 38 and 40 inch bust measures

No. 1452—Six-Gored Skirt Buttoned in Front  
Pattern cut for 24, 26, 28 and 30 inch waist measures



# The Housewife's Club

EDITOR'S NOTE—This department has been introduced for the special purpose of helping the women readers of Farm and Fireside in all problems pertaining to the household. Monthly we offer prizes as follows: Two dollars for the best description and rough sketch of an original, home-made household convenience or labor-saving device; \$1.00 for the second best; while 25 cents will be given for all household hints and recipes that can be used. This month's competition closes April 10th. Contributions must be written in ink, on one side of the paper, and must contain not more than 250 words. We would suggest that contributors retain copies of their manuscripts, as no contributions will be returned. Address "The Housewife's Club," care of Farm and Fireside, Springfield, Ohio.

## Good Washing-Fluid

**A** WASHING-FLUID I have used with success for years is made by putting one and a half ounces of crystallized ammonia, one and a half ounces of salts of tartar, one and a half ounces of borax, one can of lye and one gallon of hot water into a jug. After putting the crystals and powder in, pour the water in slowly through a funnel. Use one cupful of this fluid to the boiler, using the usual amount of soap. Be careful not to let any of the fluid spill on the floor or shoes. Either dip or soak the clothes in cold water on account of possible stains. Leave them in the boiler until they boil well. There is not the least bit of danger of the fluid rotting the clothes. I never use the washboard for the white clothes. I dip, boil, suds and rinse them, and they make a pleasing sight upon the line, and when I am through with "wash-day" I am not all worn out.

M. V. E., South Dakota.

## How to Make Beeswax

**P**ERHAPS there are many readers who do not know how to make beeswax, but are anxious to learn. I remember how I looked and looked in vain for such directions, and it was only after many fruitless and expensive experiments that I came across the information I wanted. So here is my recipe, which I trust will prove helpful to many.

The white and yellow comb is best; the dark comb contains only a small per cent of wax, and comb which contains larvae, bee-bread or drops of honey should not be used. Break the comb in convenient pieces, place over the fire in a tin or granite kettle and let melt. Rinse small patty-pans in cold water and pour the melted wax into them to harden, when it can readily be removed. The kettle should be kept for this use only. Beeswax sells at a good price.

Mrs. C. D., Iowa.

## Excellent Hot Slaw

**F**OR one quart of finely-chopped cabbage take one cupful of sweet cream, one half cupful of sugar, one half cupful of vinegar, one heaping tablespoonful of flour, and salt and pepper to taste. Put the salt, pepper and vinegar over the cabbage. Stir the sugar with the flour to prevent lumping. Add the cream and put over the fire and cook until thick. Put in the cabbage and stir until well mixed. Care should be taken to put the vinegar over the cabbage, or it will curdle the cream.

E. O., Indiana.

## Rice With Asparagus

**I**F YOU have a scant supply of asparagus for a meal try a tablespoonful of rice with it when you put it on to cook. You will need no thickening. Add cream and butter, and it is delicious. This is my own idea.

S. J. D., Michigan.

## Four Good Hints

Paint-stains may be removed with turpentine, and tar-stains with lard.

Linen suits and shirt-waists should be washed in hay-water (made by pouring boiling water over hay), and they will keep their color for a long time.

The blacking used by hardware dealers for stoves is made by mixing turpentine and black varnish with any good stove-polish. One teaspoonful of powdered alum mixed with the stove-polish makes the stove very black and gives it a fine luster.

Cabbages may be kept fresh and crisp until late in the spring by removing the outside leaves and stems and putting them in large paper bags which are not torn. After putting in the cabbage, the paper sacks or bags should be well tied, to secure protection from outside air, then hung on the cellar walls. All other kinds of vegetables can also be preserved in this way. You will find this idea worth trying.

Mrs. J. A. S., Ohio.

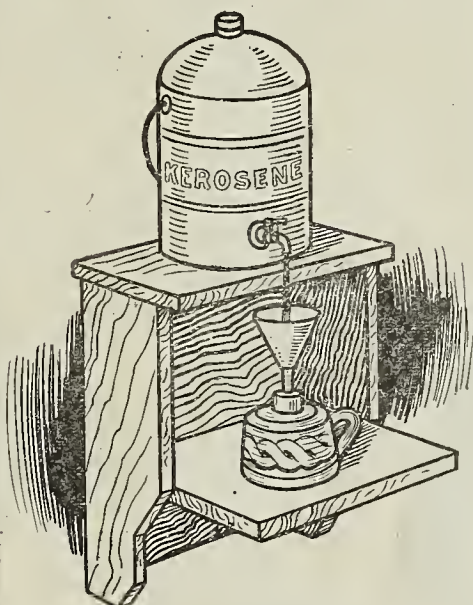
## A Thorough Cook-Book

**I** WANT to tell the readers of the Housewife's Club what I do with this valuable page of ours: I always tried to save the whole paper of FARM AND FIRESIDE, but no matter how much one tries to save it, it sometimes gets lost or torn, so I thought of a plan that would enable me to save at least the good recipes. I take twenty-four strips of stiffening or muslin sixteen inches long, and about an inch wide, and sew the strips together on one side. Then I take the outside cover of FARM AND FIRESIDE and either sew or paste it on the outside of these strips. Now I cut out the "Housewife's" page of hints and recipes and any other page that contains something I want to remember, and paste them on a strip of the muslin. The twenty-four strips will hold the "Housewife's" pages for a year, at the end of which you will have a very useful and handy cook-book. Try it and you will find it very convenient.

A. V., Nebraska.

## Stand for Kerosene-Can

**F**ILLING lamps was always a great bug-bear with me until I hit upon this splendid plan, which I want to tell our readers about. I had the man of the



Stand for Kerosene-Can

house build a stand like the one pictured above. It is large enough to support a five-gallon oil-can. Underneath is a shelf made purposely to hold the lamp. When I fill lamps, I simply set the lamp on the shelf, turn on the faucet and the work is done in no time. If desired the stand may be fastened to the wall so that it will not be necessary to stoop every time a lamp needs filling. I have found my stand a great convenience and would not be without it.

Mrs. S. J. H., Wisconsin.

## To Mend Lace Curtains

**I**F THE holes in the curtain are too large to darn, take a piece of net as nearly like the curtain as possible, or cut a piece from a discarded lace curtain. Dip it in starch-water, lay it on the hole or worn place and when nearly dry press with a warm iron. The patch will remain until the curtain is again laundered, and it will not be noticeable.

Mrs. J. A. S., Ohio.

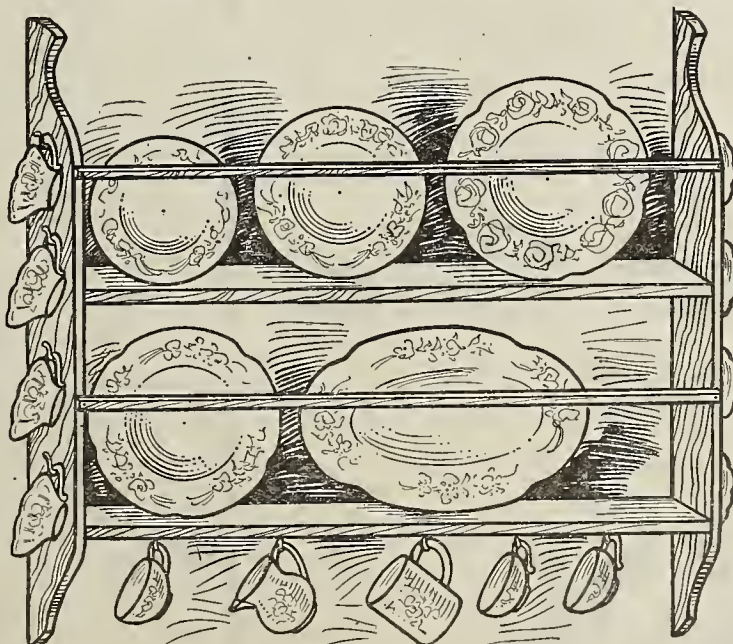


Fig. 1

An Attractive Plate-Rack for the Dining-Room

## The Value of Turpentine

**H**OT turpentine will relieve and cure cuts from rusty nails. First bathe the injured part in hot carbolic-acid water, after which apply the turpentine. Heat an old spoon over the fire, then pour the turpentine into it and apply it as hot as can be borne. Repeat as often as necessary. Be very careful not to set the turpentine on a hot stove, as it is explosive. My husband ran a rusty nail in his foot and used turpentine in this way, and did not lose a day's work.

Mrs. M. E. C., Texas.

## To Keep Sausage Fresh

**A**N EXCELLENT way to keep sausage fresh is to fry it ready for use and pack it in jars, covering with the fat from the sausage to about an inch above the top. If there is not enough fat to cover, melted lard may be used. When wanted for use, take off the fat from the top, take out what sausage is needed, and melt the lard and pour back over the remainder. We also keep our hams and shoulders in the same way. In this way we have kept our sausage until late in the fall, and it is always ready for immediate use in case of unexpected company.

E. O., Indiana.

## When Griddle-Cakes Stick

**S**TIR the batter in the usual manner, melt about a tablespoonful of lard on the griddle and pour into the batter. (This amount is sufficient for nearly a gallon of batter.) Then proceed to bake the cakes and you will have no trouble with them sticking.

Mrs. J. R. S., Missouri.

## To Whiten Faded Goods

**S**OAK the faded cotton goods in buttermilk and let stand for a few nights. Then hang goods on the line in the sunshine. Do not rinse the buttermilk from goods, but let it dry on in the sunshine. Faded lawns can be made snowy white in this manner and are splendid to use for dresses for the little tots in the family.

Mrs. O. M. R., Georgia.

## Churning With a Jar

**I**NSTEAD of churning a little left-over cream with an egg-beater, I churn mine with a two-quart jar. Have the cream thick, then fill the jar about two thirds full. Fasten the lid on tight, using a rubber. Now shake it well or roll it and in no time butter will come.

Mrs. M. W. M., Pennsylvania.

## Scotch Scones

**S**IFT together thoroughly two large cupfuls of flour, one teaspoonful of salt and one teaspoonful of saleratus. Pour in sour buttermilk—the more sour, the better—to make the dough the right consistency to handle. On a floured board roll out about a quarter of an inch thick. Cut the scones round or square and bake on both sides on a hot griddle without greasing. Serve hot with butter.

C. M. B., Pennsylvania.

## Useful Plate-Rack

**F**OR a medium-sized plate-rack like the one illustrated below, take two half-inch boards thirty-six inches long and four inches wide for the shelves, and for the side portions two pieces of board twenty-six inches long and of the same width and thickness as the shelves. With a compass-saw, cut the upper and lower ends of the side pieces, as shown in Fig. 2. With long slim round-headed screws fasten the sides to the shelves by passing the screws through the side pieces and into the ends of the shelves, having first arranged them in position, as indicated by the dotted lines in Fig. 2. To prevent the plates from sliding off the rack, attach a rail to the two side portions two or three inches above each shelf. Hooks may be screwed on the sides and cups hung on them.

Mrs. D. K. B., Illinois.

# An Appeal Only to Curiosity

In this advertisement we offer you nothing for sale; we tell you nothing about what we have to sell.

{ There are no restrictions to our offer, although it will cost us 30 cents to answer each request. }

We simply ask the privilege of mailing you **FREE** our most expensively prepared and elaborately illustrated 144-page book, "The Test of Time" and samples.

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Simply send your name and address on a postal to



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244 Elizabeth St., New York

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Do you want to have one for yourself?

This handsome watch is dainty and attractive and a fine timekeeper. It can be worn with a chatelaine pin. It is guaranteed for one year. You can get it without cost. We will send this watch for only twelve eight-month subscriptions to Farm and Fireside at 25 cents each. You can easily earn it in an afternoon. Send the subscriptions to FARM AND FIRESIDE, Springfield, Ohio

## Near-Brussels Art-Rugs, \$3.50

Sent to your home by express prepaid.

**Sizes and Prices**  
9 x 6 ft., \$3.50  
9 x 7 1/2 ft., 4.00  
9 x 9 ft., 4.50  
9 x 10 1/2 ft., 5.00  
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New Catalogue showing goods in actual colors sent free. ORIENTAL IMPORTING CO., 962 Bourse Bldg., Philadelphia.

## Why does Great Britain buy its oatmeal of us?

Certainly it seems like carrying coals to Newcastle to speak of exporting oatmeal to Scotland and yet, every year the Quaker Oats Company sends hundreds of thousands of cases of Quaker Oats to Great Britain and Europe.

The reason is simple; while the English and Scotch have for centuries eaten oatmeal in quantities and with a regularity that has made them the most rugged physically, and active mentally of all people, the American has been eating oatmeal and trying all the time to improve the methods of manufacture so that he might get that desirable foreign trade.

How well he has succeeded would be seen at a glance at the export reports on Quaker Oats. This brand is recognized as without a rival in cleanliness and delicious flavor.



# The March 25th

## Farm and Fireside

With magnificent Full Page of Paintings of Beautiful American Women in colors, other full-page Pictures, together with many additional special features, including a Thrilling Love Story, an Easter Sermon, and big Agricultural Articles. It is the great

## Easter Number

And Will be Mailed to Paid-in-Advance Subscribers Only

### Our Biggest Number

Big and handsome as the recent numbers of FARM AND FIRESIDE have been, the great Easter Number of March 25th will be the biggest, finest and most profusely illustrated and most interesting number ever presented to our readers. Below we mention just a few of the features.

The great special issue will be mailed to paid-in-advance subscribers only. If your subscription has already expired, you must send your renewal before March 30th in order to obtain this great issue.

### More Big Numbers

This great Easter FARM AND FIRESIDE, described on this page is a sample of the big fine numbers FARM AND FIRESIDE is going to send its readers. You know how much handsomer FARM AND FIRESIDE now is than it ever was before. Yes, you know how much handsomer FARM AND FIRESIDE is than any other farm paper published.

### Straight Horse Talk

Mr. David Buffum, who stands at the head of all writers on horses in America, has joined the FARM AND FIRESIDE staff. He is a fine writer and will at once furnish us with a series of articles on breaking, managing and handling horses. These will deal with all the vices of horses, like kicking, shying, running away, balking and the like.

### The Farmers' Lobby

The Farmers' Lobby, during the next few months, will be of great help to every FARM AND FIRESIDE reader. It will tell you just what is being done in Washington in the way of greater agricultural education, what plans are being made to get for the farmer bigger pay for his products, and will show how you can help to get important measures of value to the farmer passed.

### More Big Features

There are dozens of other big features that will appear in FARM AND FIRESIDE during the coming months. Send your subscription now, and do not miss them. Our great offer below makes it possible for you to subscribe for the greatest farm paper in the world at much less than the regular price, if you act at once.

### Special Easter Features

#### A Full Page in Colors of Beautiful Women

A famous artist has painted for FARM AND FIRESIDE the portraits of seven beautiful women. Never before has an agricultural journal secured such a feature, costing thousands of dollars. Seven American Beauties will be a special insert on heavy paper, all ready for hanging on the walls of your home.

#### Another Full-Page Picture

"Forgotten," one of Balfour Ker's greatest paintings, will also be shown on a full page of the great Easter FARM AND FIRESIDE. It is reproduced in monotone and depicts the old family horse standing at the bars waiting in the cold and snow to be taken to his warm stable.

#### A Cover in Colors

The Easter number will have a beautiful cover in colors, which will please every reader—it is a handsome picture, worth preserving, and makes a total of at least three full-page pictures, that our paid-in-advance readers will receive in the March 25th issue.

#### Thrilling Love Story

It will keep you absorbed from start to finish. Love, adventure, fine deeds, passion, all go to make this one of the best stories you have ever read.

#### The Easter Sermon

By the Rev. Charles F. Weedon, pastor of Howard Church, Boston, who is one of the most famous preachers in America.

#### Easter-Day in New York

A brilliant and intensely interesting description of what Easter Day is in the world's great city—the greatest day in the greatest city in the world. Many handsome photographs.

#### Easter Fashions

The latest styles and how to adapt them inexpensively to your needs.

#### Big Agricultural Features

Are you interested in tree planting? Forrest Crissey has a message for you. Prof. F. H. King shows you how to make use of the devices by which Oriental farmers have conserved their potash and phosphoric acid for thirty centuries. Another of Mr. Streeter's articles on the middle-man question—of vital, timely interest.



# Great Special Easter Offer

Good Until March 30th Only

Farm and Fireside

For 8 months—sixteen big numbers, including thrilling stories, great agricultural features, important political articles, the Farmers' Lobby, full-page pictures in colors, Sunday talks, special departments for women and children. (The regular price of FARM AND FIRESIDE for 8 months is 35 cents.)

ALL FOR

25c

## A Substitute for Ruth

[CONTINUED FROM PAGE 28]

"I ought to," he maintained, weakening. "But you won't."  
"No, I won't, I'll go to town and have a personal telegraphed to the paper. Then we'll get their proposition by mail, for they won't dare advertise that."

The personal that he inserted in the paper merely expressed a willingness to consider any proposition that "X" had to make.

Then there was an anxious wait of two days, broken only by a postal from Molly bearing the message, "I'm all right." The police had accomplished nothing beyond learning that the first telegram had been filed by a man of whom no one could give them a very good description. Mr. Conover dared not leave home to assist in the search, for he was sure the answer to his personal would come by mail and he naturally wished to get it at the earliest moment.

The answer came in the mail on the second morning. Mr. Conover read it aloud.

"You will go alone with the reward," he read, "to the fallen tree. Leave the reward and return to the house. The reward will then be taken and Molly left."

"I'd like to see myself giving up the reward before I get Molly!" he broke in, "and where's the fallen tree?"

"Go on," said Mrs. Conover.

"You will remain at the house one hour before returning to the tree. If you fulfill these conditions, you will get your daughter back; if you do not, I shall know it and shall not go near the tree. I shall expect to find the reward there at midnight to-night."

"Where?" he asked, stopping short.

"Go on," pleaded the anxious woman.

"The reward," he read, "can tell you where the fallen tree is, if you do not know. The reward is Ruth. I will exchange one daughter for the other."

Mr. Conover sprang from his chair in a fury. "It's that infernal scoundrel Winfield!" he cried. "He has stolen Molly in the hope of getting Ruth."

"I don't believe Bertram would do that," said Mrs. Conover doubtfully.

"He has done it!" declared Mr. Conover. "Can you imagine a man doing a more cruel and heartless thing to gain his ends?"

"Does the fact that he had Molly telegraph the first thing show a desire to inflict needless pain?" argued Mrs. Conover. "That's the puzzling part of it," he said.

"Is there any more?"

Thus reminded, he picked up the letter again and read: "If you do not accede to this, I shall have to return Molly, anyhow. She's too expensive a proposition for me. As she came to me uninvited, I don't really feel called upon to keep her."

"There!" she exclaimed; "I told you so! And there's writing on the back."

He turned the letter over and was confronted with Molly's scrawl.

"Nobody stole me," Molly wrote. "I just ran away because Ruth couldn't, and I thought Brother Bertram would want some one. But I guess he only wants Ruth. Anyhow, we've been having the loveliest time buying things that I like, and I hope you don't let him trade me for Ruth until I get another dress."

Mr. Conover laughed now. "Perhaps I'd better punish him by leaving Molly and her purchases on his hands."

"You'll do nothing of the sort!" expostulated Mrs. Conover indignantly. "He got word to us as soon as he could, didn't he? And he's going to return Molly, anyway, isn't he? Now, what are you going to do?"

"I'm not going to leave any reward at the fallen tree," he replied, after a long, thoughtful silence, "but perhaps we can arrange it some other way."

Followed by his wife, he went to Ruth's room and handed her the letter. She read it with many exclamations of astonishment, laughed a little at the conclusion, and kissed Molly's scrawl. "The dear child!" she murmured, between laughter and tears, "the dear, innocent, tender-hearted, loving, lovable child!"

"Do you think," asked Mr. Conover, "that you can reach Winfield by telegraph?"

"I can reach some one who will know where to find him in Chicago," she answered.

"Suppose you drive to town," he said, "and send a message to him. Say that I do not wish to leave anything of such value at the fallen tree, wherever that may be, at night. Say that I prefer he should claim the reward with the customary formalities of civilized society. Say that a house wedding looks better to me than a clandestine affair. Say that the reward will be awaiting him here and that I should like him to catch the first train, as Molly's mother—and father—are anxious to see her. And you'd better hurry."

Ruth stopped only to give him a hug and a kiss.

"Isn't Molly just the dearest thing?" she called back as she ran down the stairs.

[THE END]



# The Housewife's Letter-Box

We shall be very glad to have our readers answer any of the questions asked, also to hear from any one desiring information on household matters. There is no payment made for contributions to this column. Address the "Housewife's Letter-Box," Farm and Fireside, Springfield, Ohio.

## Questions Asked

Can some one tell me how to preserve citron dry like that which the grocer carries? N. S., Massachusetts.

I would be glad if some reader could tell me how to tan small furs with the hair on. Mrs. R. M. S., Michigan.

I would appreciate it if some one could tell me what will take out the lime sediment that sticks in a tea-kettle and if there is any way to keep it out. Mrs. T. T., Kentucky.

Wanted—A recipe for making graham crackers like those you buy. Mrs. R. H. T., New York.

Wanted—Some new ways for making curtains of scrim suitable for a dining-room or bedroom. Mrs. M. L. T., Oklahoma.

Will some one send the quilt pattern which, when finished, looks like boxes piled up. Does it require three colors, and if so what two colors will harmonize with light gray? H. A. D., Ohio.

Can white linen be colored to look like brown linen or grass cloth, as it is sometimes called? H. G. A., Kansas.

What can I do to prevent the red in a quilt from running when it is put in water? Mrs. S. W., Virginia.

Can some one tell me how to turn sweet cider into vinegar? Mrs. L. A. G., Ohio.

I would be glad to have some one tell me how to make head-cheese. E. R., Oklahoma.

## Questions Answered

**COCOANUT-CANDY**, for Mrs. C. A. M., Pennsylvania—One and a half cupfuls of sugar, one half cupful of milk, two teaspoonfuls of butter, one third of a cupful of shredded cocoanut and one half teaspoonful of vanilla.

Put butter into a granite saucepan. When melted add sugar and milk, and stir until sugar is dissolved. Heat to boiling-point and boil twelve minutes; remove from fire, add cocoanut and vanilla, and beat until creamy and mixture begins to sugar slightly around edge of saucepan. Pour at once into a buttered pan, cool slightly and mark in squares. J. L. N., Nebraska.

**BAKED PEARS**, for Subscriber, New York—Wipe, quarter and core pears. Put in a deep pudding-dish, sprinkle with sugar or add a small quantity of molasses, then add water to prevent pears from burning. Cover and cook two or three hours in very slow oven. Small pears may be baked whole. J. E. V., Florida.

**GRAHAM BREAD**, for Mrs. M. H., Ohio—For three medium-sized loaves take one half cake of yeast foam, soak in one half cupful of water; take three tablespoonfuls of graham flour, scald with potato-water, adding a little mashed potato; add salt and sugar to taste; then add your yeast and let rise until morn-

ing; thicken with graham flour and when light it is ready to work; now add a little sweet cream, two tablespoonfuls of molasses; stiffen with equal parts of white and graham flour, according to color desired. Let rise same as you would white bread and form into loaves. Grease top of loaves with butter and bake. You will find this excellent.

Mrs. H. M. S., North Carolina.

For Miss A. V. G., Georgia—If you will tell me what kind of a hat it is that you want to dye, perhaps I may be able to help you. EDITOR.

**PEANUT-BUTTER**, for Mrs. J. A. A., Delaware—Shell and grind with the nut-grinder any amount of peanuts. Melt enough common butter to sufficiently hold the ground peanuts together to make them spread well. Mix the butter and the peanuts, adding the butter until the mixture becomes pasty. A HELPER, Wisconsin.

For Mrs. J. D., Indiana—In answer to your query: "How to cure cheese to keep it from getting too dry?" we quote the following from "Science and Practice of Cheese-Making":

"Loss of moisture in cheese can be largely prevented by coating the cheese with a thin layer of paraffin, and this can be done without injuring the quality. The higher the temperature, the greater is the prevention of loss. Another distinct advantage of using paraffin is that it prevents cheese becoming moldy. The cheese is allowed to dry well on the surface and is then dipped for eight to fifteen seconds, according to temperature and size of the cheese, in melted paraffin at a temperature of at least two hundred and twenty degrees Fahrenheit. Care must be taken to keep the paraffin from acquiring a disagreeable odor as a result of overheating. Cheese should be dry enough in three to seven days to be ready to dip in paraffin, but the time will depend, of course, on the amount of moisture in the cheese and in the curing-room. The application of paraffin at a high temperature gives a thin coating that adheres tenaciously and destroys mold formation. If the temperature is too low, the coating will be too thick and will crack or break away from the cheese more easily. About five or six ounces of paraffin will cover an eighty-pound cheese, and the cost is about two and a half to three cents."

There are other methods of preventing undue loss of moisture from cheese in curing, such as keeping the air of the curing-room fully saturated with moisture, curing the cheese in boxes, etc., but none is equal to the paraffin method described above. EDITOR.

**WHITE SHELLAC**, for Mrs. S. I., Minnesota—I am sure you will be pleased with the following formula: Dissolve in an iron kettle one part of potash in about eight parts of water. Add one part of shellac and heat the whole until it bubbles up. When the shellac is dissolved, cool the solution and impregnate it with chlorin until the shellac is all precipitated. The "precipitate" will be white, but its color deepens by washing and consolidation. Dissolve in alcohol. Shellac that is bleached by the above process yields a varnish which is as free from color as a copal varnish. H. T. P., Indiana.

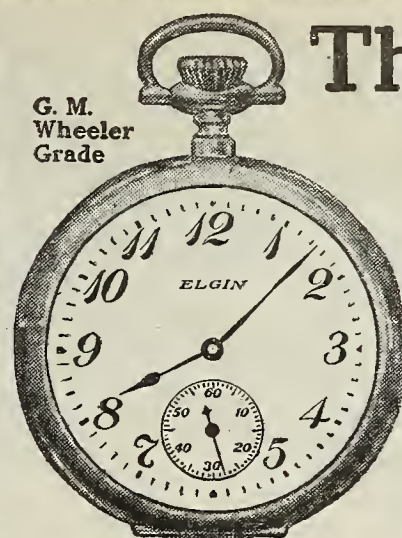
## The Day's Work

By M. G. Rambo

Every day the grind of toil for the farmer goes on. As each dawn appears he must rise to his round of duties. Those duties are in a degree monotonous, and more or less irksome, so that when the end of the day's work comes he is weary of brain and brawn, and gladly goes to the rest and forgetfulness of slumber. To the unthinking his life might appear a sort of treadmill affair, dull and uninspiring. But to the farmer with a heart alive to sentiment and a mind trained for appreciation the day's work is vastly different from that. It is full of interest and inspiration, as scarcely the day of any other man may be. So that his toil is lifted above drudgery, and his opportunity for mental and spiritual growth is superior.

Toil in itself is not a hardship. It is good. The hardship is usually in the attitude of the mind toward it. It is man's native soil and climate. Under the necessity of it he grows upward. Relieved of it he deteriorates both in character and physique. He is only happy and contented as he toils. It is a great mistake to suppose that a state of ease is one of happiness. Infinitely more misery arises from leisure and the lack of responsibility than from care and hard work. The sweated brow the most

surely protects the contented mind. This is in harmony with the instinct of the race, with the very nature of the normal man, so that we always find the best type of men continuing to toil in some avenue or other, even though their circumstances may be amply sufficient to entirely relieve them from its necessity. Thus the farmer, in the midst of his busy day, may feel himself in line with the spirit which moves his race, that spirit which pushes it onward to its loftiest destiny. In his humble digging and plowing and sowing, in his reaping and garnering, in his feeding and breeding, in all his varied activities, he is one of the infinite number of forces which are working out the evolution of mankind, and in his obscure niche in life he fills no unimportant place in the wondrous economy which directs the course of human progress. His day's work is a little accretion to the mighty sum total of human effort. It is a contribution, microscopical it may be, but very real, nevertheless, to the building of a better civilization, and his contentment, as he lays himself down to rest through the beneficent night, is a sweet reward for the faithful performance of his native functions—a reward, it must be said, which only the toiler knows.



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## Ten Post-Cards For the Asking

These ten post-cards are the famous Flower and Verse set. They are printed in gold and fourteen colors and will delight you. They are yours for the asking.



Each card contains a favorite flower printed in the exact natural colors, outlined in gold. This is the newest way of printing post-cards and makes a very handsome and rich-looking effect. It is the most expensive way of making them up, but we have succeeded in getting the most perfect and beautiful post-cards ever made.

In addition to the beautiful flowers—so real that you can almost smell their fragrance, each card contains a well-known saying of some famous character, printed in gold letters. These are the newest and most fashionable post-cards. Every one who gets them will be delighted beyond measure.

## A Great Offer

These cards would sell for 30 to 50 cents in a store, but we will send them to you without cost if you will send us three 2c stamps to pay the cost of postage, packing and handling. We will tell you how you can get more post-cards without cost, when we send you the cards. Do not fail to get a set. Send three 2c stamps to-day to

FARM AND FIRESIDE  
Springfield, Ohio

FARM AND FIRESIDE,  
Springfield, Ohio

Gentlemen:—

Please send me at once the 10 Flower and Verse post-cards for which I inclose three 2c stamps to pay cost of postage, packing and handling.

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# OUR YOUNG FOLKS' DEPARTMENT

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## What Happened to Margaret

By Mary Minor Lewis



ANY, many years ago, when the great woods stretched away to the horizon line, when painted Indians with bow and arrow stalked the deer that came down to drink at the river-bank, in the days when Massachusetts was yet a province of the English king, there lived in a log cabin on the edge of the wilderness John Norton, his wife and child Margaret.

Scattered about were other log cabins, each with a cleared space about it for a garden and pasture, and around the little settlement was a high fence made of logs called a "stockade," built as a protection by the pioneers against raids of unfriendly Indians.

The doors of all cabins were of heavy oak with bars; and bars, too, were at the windows, while loop-holes were left here and there between the logs of the cabin walls, through which muskets might be thrust if need be.

Margaret sat in her little wooden chair before the great fire, her mother at the spinning-wheel, while her father smoked his pipe in the corner.

Presently a great tear rolled down the child's cheek and dropped upon the black fur of her kitten's back, where it glistened in the firelight.

"What is it, daughter?" asked her father kindly.

"I was thinking of our old home and England, and I was wondering if grandma had fed my white pigeons that live in her barn."

"My little girl is tired to-night—and sad. Go to your bed, and to-morrow I will get for you from neighbor Blinn some white pigeons for your very own."

So the child kissed her father and mother good-night, and was soon fast asleep.

Just as the gray dawn was creeping into her window, she was startled from her sleep by the cry of "Indians! Indians!"

She leaped from her bed and rushed down-stairs. Already her mother, white to the lips, was barring the door and windows, while her father seized his musket and dashed off to join the other pioneers who were assembling outside the stockade.

A hostile band of Indians had descended upon the settlement just before dawn. They had stolen several horses and, with what smaller plunder they could lay their hands upon, had disappeared into the woods.

A party was quickly organized for pursuit, and, in the stretch of woodland between the Norton cabin and Parson Weston's house, there came to the terrified ears of Margaret as she lay trembling in her mother's arms the sharp report of muskets, and now and then an Indian war-whoop!

Then after a little all was still.

Two days passed before Margaret's father returned, and all this time the little girl and her mother remained in the cabin, not daring to unbar the door.

The Indians had been driven back into their own country and the plunder recovered, and so, for the time, the danger passed.

On the next day Margaret's mother called her and said, "Take this basket of food and dainties which I have prepared over to the good parson's wife. Her baby is ill and I know she has had no time to prepare delicacies."

Now the pastor's house was without the "stockade" and beyond the strip of woodland.

Delighted to be able to once more breathe the fresh air and to know that the dreaded Indians were far away, Margaret hung the basket on her arm and started gaily across the cleared space.

Her path led through the strip of woodland where the fighting had taken place, but she had no fear.

Little girls must need be brave in those perilous times.

Through the strip of woods which she now entered there ran a clear stream and over this was a little bridge made of logs.

She was standing on this bridge watching the curly oak-leaves sail down the stream when she was suddenly startled by a sound which seemed to come from the thick undergrowth just below the bridge, a sound very like a groan! What if an Indian should catch her!



"She stood listening, hardly daring to breathe"

How still the woods were! She could hear the beating of her own heart! She seemed rooted to the spot. She stood listening, hardly daring to breathe. Then it came again, a low pitiful moan!

She crossed the bridge and crept softly down to the water's edge, peering beneath the bushes. There, lying almost at her feet, was an Indian! His hair was matted, his eyes haggard and wild.

The savage made a sign for the child to come nearer. He pointed to his right arm which hung limp and broken,

the blood still oozing from the musket-wound. But this was not all. She bent over him, her heart full of pity. Looking down, she saw that the Indian's foot was caught in a trap, one of the steel traps which the farmers of that day set to catch bears.

For three days the Indian had lain thus, unable to free himself from the trap or to reach even the water which rippled within a few feet of his parched lips!

"Good papoose!" the wounded man whispered, "loose 'Black Eagle!' He fly far, but no forget. 'Little Brown Sparrow,' help me!"

Putting down her basket the child quickly sprung the trap, and the Indian's foot was free; then, uncovering her basket, she spread the food before him on the leaves. "Eat," she said.

But "Black Eagle" had crawled to the stream of water and lay flat, drinking as if he would never stop.

Then he crawled back to where Margaret had put the food and began to devour it.

The Indian next bound his broken arm with the napkin which covered the basket, then, turning to the little girl, he said, "'Black Eagle' with broken wing remembers! Some day 'Black Eagle' save nest of 'Little Brown Sparrow.'"

And then, silently, he stole like a shadow through the darkening woods.

Margaret hurried on, leaving her basket at the pastor's door, and then ran home.

Should she tell her parents what had happened! If she did, her father and the other men of the settlement would surely go in pursuit and perhaps kill "Black Eagle."

So as soon as she finished her supper, the excited child crept to bed where she lay wide-eyed, thinking of "Black Eagle" with his broken wing on his flight through the dark woods.

Months later a man rode wearily into Plymouth town. On a pillion behind him sat his wife and in his arms was his little daughter Margaret fast asleep.

To his wondering relatives, John Norton told this story:

"Two days ago, at midnight, our settlement was attacked by the same band of hostile Indians who gave us trouble a short time ago. Although we put up a brave fight, we were unable to withstand the assault, and by daybreak all that was left of our little town was a heap of smoldering ashes. All of my friends have been slain and their homes destroyed; but, by some strange chance, we alone were unharmed and our home unmolested. Not knowing at what moment the Indians might return, and not believing that we had been intentionally spared, I started toward the stable to see if a horse had been left on which I might escape with my wife and child. As I neared the stable, I saw 'Black Eagle,' chief of the tribe, approaching. He led 'Silver Heels,' my best horse, by her bridle.

"'White man,' he said to me, 'take horse—ride swift and far toward the rising sun!'

"Then, catching sight of the child Margaret, he said to her very gently, "'Little Brown Sparrow' flies safe under 'Black Eagle's' broken wing!'

"Then, without another word, proudly like a king's son he passed into the great woods.

"I do not know what he meant or why he spared us, but we alone of all the village are saved."

### The Letter-Box

HERE is a charming little story by one of our enthusiastic club members. I am sure you boys and girls will enjoy reading it.

#### Enchanted

One day little Dorothy went for a walk beside a river. She had seen the big girls and boys skipping over the stones by the water and she thought she would try, too. But when she tried, she went a little to near the edge and, without noticing it, she stepped on a round stone. The stone began to roll under her foot and, wasn't it funny, it kept rolling right down into the water, carrying Dorothy with it. She sank down to the bottom, but to her surprise she found it quite warm and pleasant there. The bottom of the river was covered with grass; no, it wasn't grass, it was soft, green sea-weed. Dorothy had fallen into a great big field of sea-weed. She looked around and near-by saw a beautiful castle made of pink and white coral. She walked up to the big door (made of mother-of-pearl) and knocked gently. The door was immediately opened by a beautiful mermaid. Dorothy felt sure she was a mermaid, for she looked exactly like the picture of the mermaid in her story-book. "What is this country called?" asked Dorothy. "Oh, this is the land of the Water Fairies," answered the mermaid. "And who lives in this beautiful castle?" asked Dorothy, lowering her voice. The mermaid smiled and said, "The queen of the Water Fairies." "Oh, may I see her?" asked Dorothy. "Sh-h-h," said the little mermaid, "speak softly. Our queen does not like mortals and will only see them on the last day of every month." Dorothy clapped her hands for joy, but remembering the mermaid's caution, stopped shortly and said, "Oh, then, I may see her, for this is the last day of September." "Come in and wait here and I will go and ask the queen," said the good-natured little mermaid. The room into which she led Dorothy was very beautiful. The window-panes were made of fishes' eyes, with ornaments or coral, and the chairs and table were made of mother-of-pearl. Dorothy thought the curtains were the most wonderful she had ever seen; they were made of pale pink and green sea-weed looped back with chains of

dainty shells. As Dorothy stood gazing at the fascinating room, the mermaid returned and told her that the fairy queen would see her that night. "Oh, how lovely," exclaimed Dorothy, "that will suit me beautifully," for to this funny little girl time did not seem to count any more. Of course, you see, she was enchanted, but she did not know it and that was why she forgot home and school and everybody and everything. I would like to tell you some of the wonderful things Dorothy saw and heard that day, but that would make my story too long, but this I must tell you, that Dorothy did see the queen of the Water Fairies. She told me so herself, for Dorothy is my cousin. But, after all, I guess it was just a nice little dream.

C. MARY CAMPBELL, Age Ten,  
Glace Bay, Nova Scotia, Canada.

DEAR COUSIN SALLY:—I meant to have written a long time ago, but I have not had time. I believe I have more reason to be happy over our club colors than any one else, for aren't royal blue and white our own dear high-school colors. The first thing I noticed when I received my pin was its color. Why, I sang the high-school song, gave all of our yells and I actually nearly hugged myself for joy. You could not have chosen a better color for our club button. If you could attend one of our ball-games you would see how enthusiastic we are over our "royal blue and white." I wish good luck to both "Royal Blues and Whites." Your loving cousin,

EDITH J. YOUNGBERG,  
Lake Park, Minnesota.

DEAR COUSIN SALLY:—I received the book you sent me as a prize. I have read it through and like it so much. I think it was more than worth my efforts, for I did not expect to get such a lovely prize. I thank you very much for it. Wishing you much success in the future, your cousin,

ROY EMERSON,  
Guy, Texas.

DEAR COUSIN SALLY:—I live away up in the Sierra Nevada Mountains where we have a good deal of snow in winter. It is just lovely here in the summer. I live near the old Emigrant Road that so many people traveled over when they came to California in the early days

when gold was first discovered. I liked your letter about the Japanese people and hope you will tell us about other lands, because I like to learn all I can about foreign countries. I love to read stories of travel. Your loving cousin,

ETHEL E. STIRNEMANN, Age Nine,  
Defender, California.

DEAR COUSIN SALLY:—This is my second letter to your club. I received the button and think it is lovely. Since I am now one of the cousins, I will correspond with any boy and girl of my age. I promise to live up to our club's motto. I go to school and I am in the sixth grade.

Your cousin, FRANK ALBERS, Age Thirteen,  
Cottonwood, Idaho.

### Monthly Prize Contest

RECENTLY, I have received quite a few letters from boys and girls wishing to know if they could compete in our monthly prize contests if they were not members of Cousin Sally's Club. When the club was organized, I tried to make it clear to my boys and girls that they were welcome to enter our contests whether or not they were members of the club or subscribers to FARM AND FIRESIDE. Every boy and girl who reads this page is at liberty to try for our monthly prizes.

This month they are for the best stories. Subjects: "Bob and the Indian" or "Margaret's Visit to the Queen of the Flowers," or you may write Verses. Subjects: "Grandma's Garden," "Playing on the Hay-Stack" or "The Violet."

The boys and girls who do not like story-writing may send in drawings. Subjects: "My Pet" or "The Dusty Road" or "The Old Castle."

The prizes offered this month are books, paints, doll's dishes, beads, paper dolls, pen-knives, lead soldiers and post-card albums. Write in ink, on one side of the paper only, and be sure to write your name, age and address at the top of the first sheet. Address Cousin Sally, care of FARM AND FIRESIDE, 11 East 24th Street, New York City.

### Prize-Winners in January 10th Contest

Myrtle O. Potts, age fourteen, Bellevue, Tennessee; Albina Hamberger, age twelve, R. F. D. 4, Tyndall, South Dakota; Annie J. Langberg, age fourteen, Ringwood Manor, New Jersey; Florence Clark, age ten, Schoharie, New York, and Margaret V. E. Langston, age thirteen, Bridgeton, New Jersey.

The following cousins deserve honorable mention: Kitty Crossman, age twelve; Eva Brott, age ten; Jesse C. Shields, age fourteen, Ruth Birdzell, age twelve; Roy McNaught, age nine; Jessie Pratt, age thirteen; Gladys Pool, age fourteen; Lillian Tucker, age fifteen; Ethel E. Stirnamann, age nine.

NOTE—All boys and girls wishing to join Cousin Sally's Club may obtain a button of membership for five cents. Address Cousin Sally's Club, FARM AND FIRESIDE, 11 East 24th Street, New York City.



# How to Get, Without Cost, Farm and Fireside's Great Flower Offers

## Rose-Bushes

and Other Great Flower Collections

### The Five Best Roses

(Collection No. 101)

Every one a strong, healthy bush which will bloom the season of 1910. All are different. All are famous varieties as follows: *Climbing Meteor*, the brightest colored of all roses and a persistent bloomer; *Mrs. Ben R. Cant*, deep red and one of the hardiest and finest varieties; *Mlle. Franzisca Kruger*, deep yellow—unique and distinct from all others; *White Maman Cochet*, snow white, tinged with the faintest suggestion of blush; *Etoile de Lyon*, one of the hardiest and most beautiful yellow tea roses. *See offers below and opposite.*

### Five Fragrant Carnations

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Every plant in this collection is a beauty. They will be shipped to you carefully packed, all ready for setting out. Here is a list of the plants: *Prosperity*, the largest carnation ever offered; *Rose Pink Enchantress*, one of the most famous varieties; *Red Sport*, the showiest variety of carnation ever grown; color a flaming scarlet; the brightest dazzling crimson—the largest and best of its color; *Lady Bountiful*, pure white, sweetly scented with old-fashioned clove fragrance. *See offers below and opposite.*

We Guarantee That These Flowers Will Bloom This Season of 1910

### How to Get the Flowers

Send us only TWO 8-month subscriptions to Farm and Fireside at the special price of 25 cents each, and we will send you, without cost, any one collection of flowers offered on this page. The subscriptions may be new or renewal. One of the subscriptions may be your own. Tell your friends that an 8-month subscription to Farm and Fireside at 25 cents is a bargain that they can only get through you.

Send Your Order Before March 30th

### More Flowers Without Cost

For THREE 8-month subscriptions to Farm and Fireside at 25 cents each we will send you any TWO collections of flowers; for FOUR 8-month subscriptions at 25 cents each we will send you any THREE collections of flowers. We will send an additional collection of flowers for each additional 25-cent subscription you send us.

Send Your Order Before March 30th

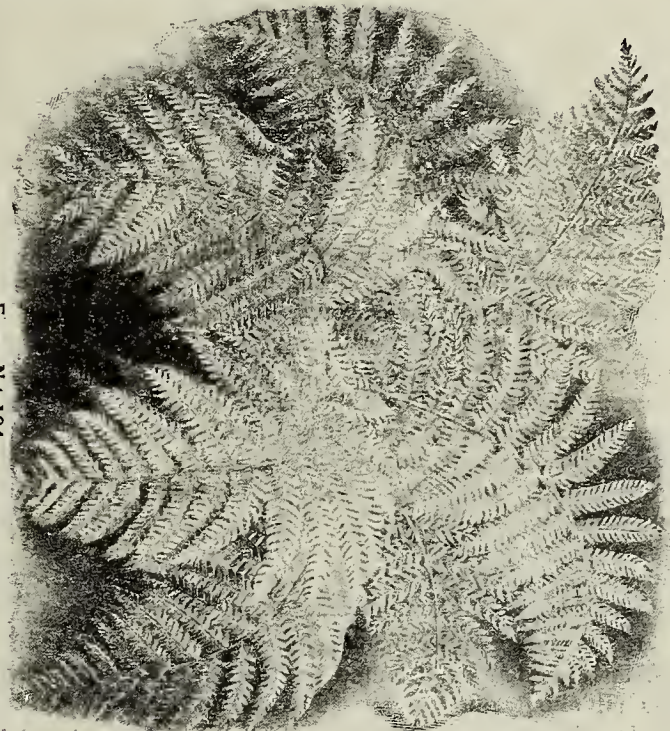
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Of all plants for pot or interior decorations, ferns occupy the place of favor. You will receive, carefully packed, already for setting out or potting, four handsome ferns all different, all well rooted, as follows: *Boston, Emerald, Fountain and Asparagus*. *See offers above and opposite.*

### Guarantee

All plants will be large, healthy and well rooted and will bloom the coming season. We guarantee them to be exactly as described, to arrive in perfect condition and to give entire satisfaction or your money cheerfully refunded. Every flower collection will be sent carefully packed, with delivery charges prepaid by Farm and Fireside, and will be sent to any address you designate.



Ferns No. 104



Chrysanthemums No. 102

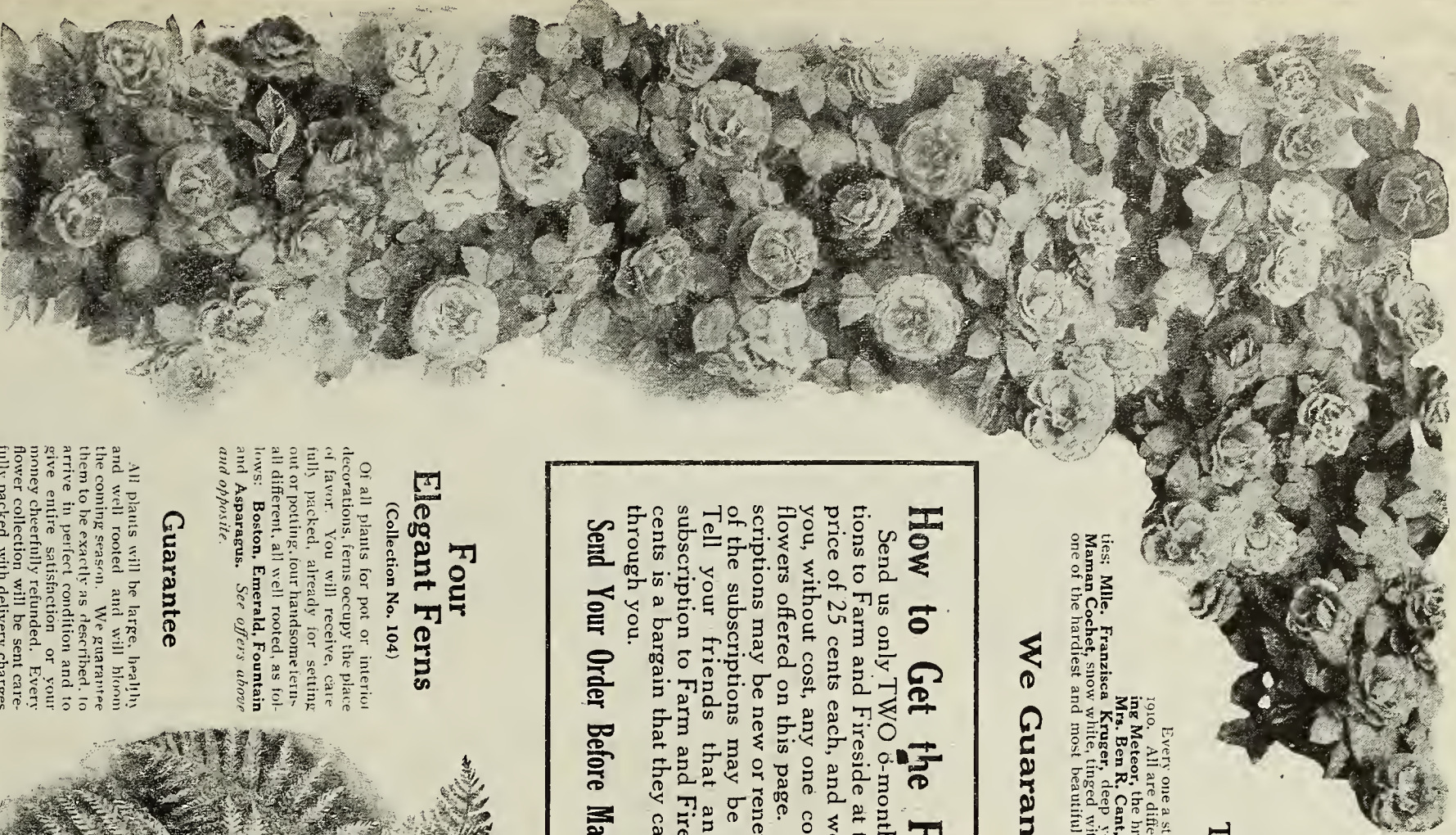
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### Cultural Directions

Collections must be ordered entire. Accompanying each lot of plants are full directions for planting, care, etc. Please state what month you prefer to have your plants sent to you.



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3c to 35c a double roll of 16 full yards is our range of prices for the finest 1910 designs and qualities in wall papers, made in our own Wall Paper Mills and sold to you direct on the basis of actual mill cost and one profit. If sold in the usual way through agents or dealers, such popular designs and qualities would cost you at least twice our price—in fact many ask much more. We guarantee to satisfy you or return your money. Fill out the coupon below and get your copy of this MONEY-SAVING Sample Book NOW, for house-cleaning time is here.

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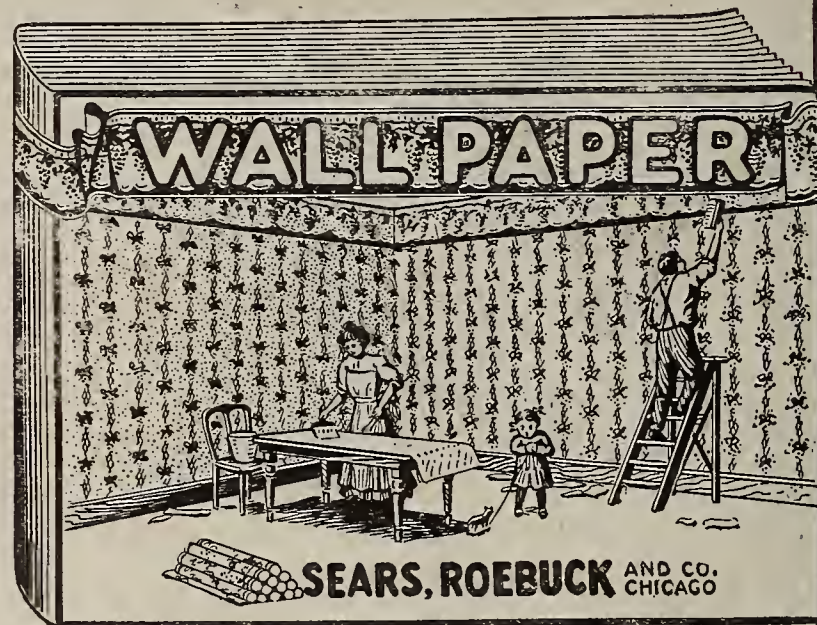
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FOR THE BEDROOM—A great variety of chambrays, woven cloth effects with cut out border or beautiful festooned borders to be appliqued, small borders with Dutch scenes, mountain, woodland, water and landscape. Papers with crown borders, gilt papers with set and floral designs. They cost little at our mill prices.

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We tell you how to hang wall paper in our Wall Paper Sample Book; how to match and trim it; how to apply the paste; how to hang the ceiling, border and side wall paper; every point is carefully and simply explained, step by step, with the aid of illustrations so that anyone without previous experience can do just as nice a job as an experienced paper hanger and decorator. If you do the work yourself you can paper the rooms in your home at from 26c to \$3.20 a room. Think of the saving. For this information alone our Wall Paper Sample Book will be valuable to you. Your name and address with a cross in the square on the coupon will bring you this valuable book free. Now is the time to send for it.

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# FARM AND FIRESIDE

THE NATIONAL FARM PAPER



ESTABLISHED  
1877

MARCH 25  
1910



J. Lawrence Stone



# Big 30-Day Offer

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We have just decided on this special spring offer to introduce FARM AND FIRESIDE, the National Farm Paper, into 100,000 new homes. We ask every friend of FARM AND FIRESIDE to tell their friends about this great introductory offer. We promise that FARM AND FIRESIDE will continue to be the most interest-

ing and useful, the handsomest and biggest farm journal published. We guarantee to please every reader or to return his money. Any present reader who wishes to take advantage of this offer, and advance his subscription, can do so. Show this offer to your friends. Ask them to subscribe.

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### The Farmers' Lobby

FARM AND FIRESIDE has a lobby at Washington—so have the largest corporations in the country. Our Lobby is a good one. Mr. Judson C. Welliver, one of the best known legislative writers in the country will attend sessions of the United States Senate and the House of Representatives.

When legislation affecting farmers' interests comes up you will be notified through the columns of FARM AND FIRESIDE of the projected legislation with a discussion on how it will affect you.

This will be in time to arouse the attention of the great number of American farmers to the matter, so that they may request their representatives and senators to vote for or against the legislation as it may suit their best interests. Mr. Welliver knows the ways in which agricultural interests may be betrayed. This is the most important coöperative work ever begun by a farm paper.

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**Power on the Farm**—Marshal O. Leighton, the foremost authority in the country on river engineering will tell how to utilize every bit of water on your farm for power. Later articles will discuss other sources of power.

**Robbing the Farm**—G. C. Streeter will contribute further articles on the distribution of farm products and the middle-man question.

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### Farm and Fireside

will show you how to get bigger crops; how to raise better live stock; how to make more money out of every department of your farm.

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FARM AND FIRESIDE is conducting a lobby at Congress in Washington for your benefit. You will know how prospective legislation will affect you if you read the Farmers' Lobby in FARM AND FIRESIDE.

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FARM AND FIRESIDE, during the next year, will publish one or more complete novels by the best writers, besides many interesting stories. You will be delighted with the stories in FARM AND FIRESIDE.

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FARM AND FIRESIDE is a complete home magazine so far as the women are concerned. It has departments for fashions, cooking, household hints and a great children's department.

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Practical articles of value to every farm will be written in every issue of FARM AND FIRESIDE by the best known writers in the country on their respective subjects.

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A beautiful gift, absolutely free, will be presented by the publishers of FARM AND FIRESIDE to every subscriber who takes advantage of this special offer. There is no charge at all for this gift.

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Every issue of FARM AND FIRESIDE has a handsome cover in color, the picture being painted by a popular artist. In addition, FARM AND FIRESIDE has, from time to time, beautiful art pictures inserted in each number, which are ready for framing. No other farm paper in the world gives its readers such extraordinary and valuable art features.

### Thrilling Novels

FARM AND FIRESIDE always has a thrilling story full of heart interest. In this issue begins a two-part story entitled "The Mysterious Envelope," or "The Missing \$100,000," by Charles Edmonds Walk. It will be profusely illustrated by R. Emmett Owen.

This is the story of a man who pays his last cent to get a registered letter addressed to him out of the post-office and finds that it contains a tremendous amount of money. There is a touch of romance, bringing in his childhood sweetheart. It will be the most interesting story you will read in a good while.

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FARM AND FIRESIDE is a complete home magazine from the woman's standpoint. It treats of the latest fashions and gives descriptions of simple home dresses, cooking recipes, hints for household economy, a Bible study lesson and a department for children. Besides all this the best stories obtainable are printed in FARM AND FIRESIDE.

### For the Children

FARM AND FIRESIDE knows that to have a magazine for the whole family it must be of interest to the children. There are the nicest stories that any child would ever want to read, with the most delightful and interesting illustrations. Thousands of boys and girls write letters to Cousin Sally and read with interest her letters to them. The boys and girls have a little club which is full of fun.

Then, too there is the puzzle page, which offers instruction and amusement to the younger, as well as the older, members of the family. The prizes for short stories by the children of our immense family constitute another instructing and attractive feature for the younger ones. In all, the children are well remembered, and we have many testimonials of their appreciation of the special pages devoted to them in FARM AND FIRESIDE.

## Send Your Order On This Blank To-day

**FARM AND FIRESIDE**  
Springfield, Ohio

Dear Mr. Editor:—

Please send me FARM AND FIRESIDE for eight months at the special price of 25 cents. Also, send me without cost the Publishers' Gift.

Name .....

Address .....

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This coupon, if sent to FARM AND FIRESIDE before April 25th, together with any offer made in this pamphlet, certifies that the sender is entitled to a

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The Gift is an additional feature of FARM AND FIRESIDE's great Easter offers. It makes these Easter offers more generous and valuable than any offers ever made by a farm journal.

It is a surprise and will bring cheer and good will into the home of every friend of FARM AND FIRESIDE who accepts one of these offers.

## Until April 25th

There is no charge at all for this additional gift. It will be mailed, without cost to every reader who subscribes before April 25th.

The Editor of the Fireside Departments will send this beautiful gift to you with his compliments. And take our word for it, that every one in your house will be greatly pleased with it.

Use the Blank Opposite To-day





Vol. XXXIII. No. 12

Springfield, Ohio, March 25, 1910

PUBLISHED  
SEMI-MONTHLY

## A One-Man Improvement Association

By Forrest Crissey

OUT in Glen Ellyn, Illinois, is a one-man improvement association by the name of "Doc" Johnson. He is it, and all of it. There is a world lesson, big enough to shame a nation, in its history—in his story.

Most great stories may be told in a line or in twenty-four chapters—neither condensation nor expansion kills the kernel of that kind of a tale. If I were compelled to put the story of this odd patriot in a line, it would read something like this:

"Works for the common good and 'finds' himself; has furnished and planted in his town miles of shrubbery and more than seventeen hundred trees without cost to anybody but himself; would rather restore a sick tree to health than treat a paying patient in his office."

But this story of the most remarkable improvement association in America really begins with a little "bound-out" boy sitting on the beam of a plow and gazing across the furrow-seamed April field around which he had been plowing until his legs ached and his heart was heavier than his feet. He was only ten years old and so short that he had to reach up to hold the handles of the plow.

The Bound-Out Boy hadn't finished the furrow he was plowing in the soil of that little New York farm, but he had come to the turn of a life furrow that was harder to handle than any which had ever curled back from the mold-board of his plow! Injustice can smite as hard upon the heart of a boy as upon the heart of a man, and the soul of the little lad on the plow beam was smarting under a long cudgeling from this hand. He knew the conditions of the servitude, which had been imposed when the old farmer "took" him at the age of seven—that dark year when he had been left without father or mother; he was to work for his keep, but the "old man" was to give him a winter's schooling each year, and clothe, and house, and feed him as other farmers did their own boys.

Bitterly the small philosopher of the plow-beam asked himself what had been his portion in the matter of clothes? There was not another boy in the country who was dressed so meanly, so coarsely. And how about the schooling? Not a month nor a week had he known in the glad companionship of the school-room. Of only one thing had he been given a generous abundance—work! Always work without stint or mercy. Not in all the time of his bondage had he been given a ten-cent "shin-plaster" or even a copper to spend. He was simply the Old Man's Bound-Out Boy and nobody cared!

Suddenly he started up from the plow-beam, unhitched the horse and headed for the barn.

"I'm through," he announced as he went to the house and began to collect his small belongings into a bundle that would scarcely have stopped the draft of the kitchen stove-pipe. Then he took to the road which led to Buffalo and walked as he had worked.

He liked horses and had a knack with them, so when he had trudged into Buffalo his feet naturally gravitated toward a livery stable. They didn't turn him away, so he stayed. His adoption into the stable differed in no essential from that which had made the stray barn-dog a recognized personage about the place. He was well fed and comfortably housed, but he and the dog drew their wages and clothing allowance on

the same schedule! At first he bunked in the stable, but sleep he could not. The strange noises of the city were maddening to his country ears. But, finally, he was taken into the home of one of the stable-men and grew accustomed to the uproar and confusion.

He was clever with the horses, but shy with men. Each month he clung to the hope that the owner of the stable would unstrap the wallet which swallowed up so much money and say:

"Now I've put you on wages." But not so much as a fifty-cent script did it disgorge! His only clothing was a barn outfit of hickory shirt, wammus and overalls. They were of good material, for they lasted a year in daily service.

One day he heard that a certain man on the avenue wanted a stable-boy to care for his span and rigs. Here was his chance, and he ran block after block. His application was offered so breathlessly that it suggested the vocal efforts of a peanut-roaster. But he got the job! Suddenly the realization that there must

been burned into him. He must make his own place, and to do this, so that some stray lance of misfortune might not take him unawares, he must have a protection fund laid by to carry him through a pinch.

Therefore, he went after the job as hotel porter and got it. Travelers did not then go about with pockets filled with dimes and quarters and induce paralysis of the arms by the frequency with which they handed out the small coins to those who rendered them perfunctory service. The European tip slavery had not fully descended upon the American public, and the waiter, bell-boy or porter who then received a gratuity generally won it by special attention, good nature or a service out of the ordinary. But the Bound-Out Boy was a hustler who smiled as he hustled; he had a quick answer to every question and his face was a map of willingness, which his nimble legs and sturdy arms made good on every demand. Dimes and quarters came his way and grew into dollars. He prospered—no question of it—but he had not yet found a friend!

One day the chiropodist to whom he had taken a guest of the hotel stopped him and asked:

"Will you come to my house for dinner Sunday?"

This was the first time he had ever been invited into a home as a guest, and his heart leaped to it with the stored-up hunger of years! And what a dinner they had! Instant adoration of this first friend, and all that belonged to him, overflowed the grateful eyes of the boy. The little shop of the chiropodist became the place to which he always turned whenever he had a leisure moment, and he was eager to lend a hand in any service possible. The calling which was good enough for his

friend was good enough for him! And before the owner of the shop knew it, the boy had "picked up the business."

But in those earlier years of work he had also picked up something else, that of which he had been defrauded in his days as a bound-out boy: A knowledge of reading and writing and arithmetic. It was not easy, but he was used to hard things and he saw that he had to have it, that it was just as necessary to making something of himself as the savings account in the bank. To take an old file and fashion it into a serviceable tool of his calling was far easier than to master the alphabet or the multiplication table, but he worked out both at the same bench.

There are those who smile at the mention of a "corn doctor." But there are many who secretly and unsmilingly seek his ministrations. And the Bound-Out Boy did the work of his humble profession as he did everything else to which he had set his hand—well, and with his whole heart. It was the profession of his friend, why should he not be proud of it?

Again he prospered. And prospering, he saved. The School of Hard Knocks had sharpened his constructive faculties and made waste abhorrent to him. He loved to make things and to save things, to build and to outwit loss and decay and waste. But there was one thing against which he was in chronic rebellion: The confinement of his prosperous city office grew intolerable to him. He wanted to be out among growing things. The office and the city grew to seem more prison-like to him. Finally he went to a suburb some fifteen miles from Chicago and bought a home. He was told that it was a "dead town," but that didn't matter, for it

[CONCLUDED ON PAGE 23]



A Fine Tree is Rotting at the Heart. "Doc" Johnson Cleans and Fills the Cavity and Saves the Tree

be a wide difference between the care of the fine span and the care of the horses of the farm and the livery stable came upon him. He must find out how to do it right before he made a mistake which might cost him his job. Seeing a man about a neighboring stable, he cut across the lawn and explained the situation. The good-natured hostler was flattered by the appeal for instruction and gave it generously. The owner of the span never had reason to suspect that his new stable-boy was lacking in experience.

A good part of the first wages which he received was carried to the savings bank and deposited, the balance went for clothes. The Bound-Out Boy had learned the full size of a dollar and the eagerness of men to get and to keep it. He determined to build an independence from their greed and avarice so that he might make something of himself. In all that first year of wage-earning he did not permit himself the expenditure of a cent for candy, peanuts or the little personal gratifications which are as inseparable from boyish desires as the appeal of a circus poster. And each pay-day saw his savings account swelled a little larger.

Meantime, with a boy's quick wits, he had learned the geography of the town and made a few acquaintances. From one of these he one day learned that there was an opening in a hotel where the wages were better. He hated to give up the horses, which were his closest friends, but there was the savings account! No man had ever given him a free gift of a dollar's value and he remembered his servitude as a bound-out boy and the moneyless year of toil in the livery stable. It was clear that he must stand on his own pins, fight his own battles and take care of himself. That lesson had



# Good Water for the Farm—Part II.

## What Pollution Is and How to Find It—By Vincent J. Youmans, M.D.

IN ORDER to obtain up-to-date information on the subject of water analysis I wrote to Professor Mason, of the Troy Polytechnic Institute, from whose books several quotations have been made. The following extracts are from his reply:

"It is very rarely I report upon a water, basing the opinion as to quality upon the analytical results alone . . . A sanitary examination demands, in addition to the analysis, a "sanitary survey." Analytical results which would pass a water as "good" in one locality might entirely condemn it should it be derived from another place. Moreover, an investigation such as the case would require would demand a bacteriological examination . . . and samples for such work have to be collected with special care and some of the work done upon the spot."

In other words, while the actual chemical analysis of the water in the laboratory is not an overwhelmingly expensive operation (it costs about fifteen dollars), an adequate sanitary examination is quite costly. The chemist's work is only a part of it.

After receiving Professor Mason's letter it occurred to me that possibly the government, federal or state, had made some provision for the farmer's needs in this respect. I wrote to Dr. A. C. True, at Washington, Director of the Office of Experiment Stations. He replied that while a number of the experiment stations had done work of this kind, the stations as a rule were not prepared to undertake the analysis of water. This work, he suggested, more properly belonged to the state boards of health.

Following up this clue, I sent a similar request to Dr. Eugene H. Porter, the Commissioner of Health for the state of New York. The essential part of his reply was as follows:

"Any citizen of this state who is in doubt as to the purity of his water-supply can engage the services of this department to make that supply safe, even if the water suspected be only a private well or spring. The method for him to follow is to state his case to the local health officer . . . When the health officer is informed of the individual's suspicions of a water, the matter must be investigated by the health officer, and when such officer considers that there is ground for such suspicion . . . this officer is empowered to request the examination of the water by the state department of health . . . every examination of this nature is made without cost to the individual citizen . . ."

### Private Analyses Are Hard to Get

From a printed circular inclosed with Doctor Porter's letter it is apparent that the way of the farmer in pursuit of a state water analysis, would be exceedingly thorny, in New York State at least, and there is no reason to believe it would be any easier in the other states. For instance, the circular says: "The examination of individual and private sources of water-supply cannot be undertaken unless some public health problem is involved." And it is further explained that even where a case of typhoid fever has occurred among those using the water an analysis is not called for until all other sources of infection have been excluded. What the farmer wants is an examination before the case of typhoid, not after it. He wants to lock the barn before the horse is stolen. It is evident that despite the best intentions a single laboratory at the state capitol would be neither a convenient place to carry on such work for the entire state, nor at all adequate to do it, if there was any considerable demand for private analysis. The ideally convenient places are the experiment stations. They could at relatively small expense be equipped with the necessary facilities. There seems no good argument against their utilization in this way. Under present conditions it is evidently cheaper for the farmer to move his well to a certain safe location. This is probably the wisest procedure under any circumstances.

In case, however, he decides to have an analysis made, he will want to know something about the meaning of its figures and why the sanitary engineer he employs condemns or commends the water.

The substances tested for in a chemical analysis of drinking-water are such as would be introduced by sewage and other waste material from human habitations. The ammonia, chlorin, nitrates, etc., are of importance not at all because they are harmful in themselves, but because their presence in unusual



"Water from ponds filled with weeds, while unpalatable, is not necessarily infectious"

quantity indicates the possibility of pollution with human secretions. A water rich in organic matter of vegetable origin may cause some intestinal disturbance, and the same is true of a hard water drunk by a person used to soft water, but these conditions are of minor importance when compared to the presence of sewage pollution. To illustrate the general character of chemical water analysis, and the differences between pure and impure supplies, the accompanying table is abstracted from Professor Mason's "Examination of Water." The first four were impure waters, the last three pure waters.

RESULTS OF ANALYSES, IN PARTS PER MILLION

|                                             | Free Ammonia | Albuminoid Ammonia | Chlorin | Nitrogen as Nitrates | Nitrogen as Nitrites | Total Solids |
|---------------------------------------------|--------------|--------------------|---------|----------------------|----------------------|--------------|
| City well (caused typhoid) . . . . .        | .005         | .035               | 146     | 10                   | 0                    | 769          |
| Spring water (caused dysentery) . . . . .   | .01          | .025               | 6       | 7                    | 0                    | 35           |
| Country well (strong salty taste) . . . . . | .59          | .245               | 2803    | 0                    | .25                  | 5225         |
| Deep well in stock-yard . . . . .           | 1.725        | .025               | 80      | 0                    | trace                | .....        |
| Mountain spring . . . . .                   | .04          | .048               | 4       | 1.404                | trace                | 228          |
| Lake Erie (middle) . . . . .                | .045         | .112               | 3.5     | .08                  | trace                | 134          |
| Domestic well (Catskills) . . . . .         | .016         | .007               | .75     | .175                 | 0                    | 32           |

Any considerable amount of free ammonia is held to indicate recent contamination probably of animal origin. Considerable daily variations in the amount of free ammonia is a suspicious sign. An excess of albuminoid ammonia suggests the presence of organic matter in a fresh or semi-putrid condition. Sewage is rich in chlorids, hence a high percentage of chlorin in a well water open to possible sewage pollution is of serious import—unless some other source of chlorids is available. The nitrites and nitrates also suggest contamination, the former of recent date. The exact interpretation of analytical results is still in dispute among sanitarians, and half a dozen different standards for a "safe" water have been set. One of the best, devised by Mr. R. Haines for waters about Philadelphia, is appended below as it is quoted by Professor Mason.

As a matter of fact, each region has its own standard. Water rich in chlorin from a region in which large salt deposits occur may be quite potable. Water from ponds filled with growing weeds and Algæ, rich in organic matter, while unpalatable, is not necessarily infectious. Similarly, waters coming from peaty sections may be rich in organic matter and still be potable.

| R. HAINES' STANDARD FOR PURE WATER                |       |
|---------------------------------------------------|-------|
| Free ammonia, parts per million . . . . .         | 0.031 |
| Albuminoid ammonia, parts per million . . . . .   | 0.044 |
| Chlorin, parts per million . . . . .              | 11.9  |
| Nitrogen as Nitrates, parts per million . . . . . | 5.075 |
| Total solids, parts per million . . . . .         | 125.7 |

Another standard, differing from the above, has been worked out by the Michigan State Laboratory of Hygiene.

| THE MICHIGAN STANDARD                             |      |
|---------------------------------------------------|------|
| Free ammonia, parts per million . . . . .         | 0.05 |
| Albuminoid ammonia, parts per million . . . . .   | 0.15 |
| Chlorin, parts per million . . . . .              | 12.1 |
| Nitrogen as Nitrates, parts per million . . . . . | .9   |
| Total solids, parts per million . . . . .         | 500. |

This latter standard, however, is characterized by Professor Mason as too severe for general use.

A water may give a good chemical analysis and still contain typhoid germs. To be really thorough-going the examination must attempt to detect pollution not simply by chemical tests, but by a bacteriological examination. Of course, disease-producing bacteria may not be present at the time of the examination, and still be introduced afterward, if the water is being contaminated by sewage. Therefore, in the bacteriological examination of water not only disease germs, but other germs which serve as indicators of sewage pollution are sought for, the chief search being for those organisms which haunt the human intestines. The commonest of these is a small bacillus called *Coli Communis*, which closely resembles the typhoid germ. Unfortunately, however, it is a normal parasite of the domestic animals as well as man, and its presence simply indicates pollution with animal excrement, which may or may not be of human origin.

### Running Water a Necessary Luxury

It is hardly necessary to say that a clean, wholesome water for washing dishes and clothes is also desirable. Epidemics of typhoid fever have been traced to infected wash-water used in dairies. An ample supply of running water in the farm-house is not only a great convenience, but also of extreme sanitary value. It immediately solves the worst difficulty in the sewage problem on the farm—by its provision of a vehicle for the underground removal of all house waste. It banishes (or should) the outdoor toilet, a result to be devoutly wished for. It promotes personal cleanliness. Taking a bath in a wash-tub in December, in water heated on the kitchen range is so arduous and chilly an undertaking that it is likely to be more honored in the breach than the observance. And running water cuts the work of the farmer's wife down at least one half. When one



"A case of typhoid might easily be transmitted downstream for miles"

considers the wear and tear on her nerves, a doctor would call that a therapeutic result of no mean importance.

It is hardly within the province of a sanitary article to discuss in detail the various methods by which such a continuous supply of running water can be secured in the farm-house. It may be said, however, that there are very few locations outside the arid regions where by means of a gravity flow from some neighboring hillside, a windmill, a hot-air pump, a gasoline-engine or a hydraulic ram, the problem cannot be solved with little study and at reasonable expense. In default of any of these there is the cistern in the cellar, tank in the garret and hand pump in the kitchen combination to fall back on. With a good-sized cistern a constant supply of rain-water may be had, and a system of plumbing, including hot-water boiler, bath-tub and indoor toilet, installed that will be quite as satisfactory as anything attainable in the city.

### Trust Rain-Water, But Not Stream-Water

An hour or two of elbow grease applied once or twice a week to the pump in the kitchen keeps the system in perfect working order. At slightly increased expense a motor-driven pump can be used instead.

Cistern water—that is, rain-water—provided the cistern be clean and protected from soil contamination, is a safe drinking-fluid, though very far from pure, containing as it does the washings from roof and leaders. The reader will find a very full account of the various systems of water-supply for the farm in the first volume of Bailey's Cyclopaedia of Agriculture. Pond or stream waters are rarely used for drinking on the farm, and rightly so. The water of running streams receives many varieties of dirt, most of it harmless, a small proportion extremely dangerous. When, for instance, a brook flows through the premises of one farmer, not infrequently through his barn-yard, and then within a few rods or half a mile supplies the next farm with water, the opportunity for disease germs from the first establishment reaching the second is obvious. If the brook-water is used by the down-stream family for drinking or even for washing dishes it is always a possible source of danger. A case of typhoid in family number one might easily be transmitted via the brook to family number two, and even be spread down-stream for several miles. Similarly infectious diseases among the first farmer's stock might endanger all the other farm animals which depended upon the brook for their drinking-water. "Running water purifies itself" is an old adage that holds good only when the stream has run many miles—and then not surely.



"Epidemics have been traced to infected wash-water in dairies"



# SEVEN AMERICAN BEAUTIES







- Wm. BALFOUR KER.

"FORGOTTEN"—Painted by William Balfour Ker



# How Far Shall We Follow the Orient?

## Fertility Resources America Has Left Untouched—By Prof. F. H. King

IN OUR last article it was shown how thoroughly these old nations long ago came to appreciate the importance of nitrogen and humus in crop production; how they solved the problems for their maintenance under their conditions, and to what intensive methods of culture they have been driven in order to maintain such dense populations as theirs. We speak now of some of the methods by which these people have been, and are now, maintaining other essential plant-food elements in their fields.

In each of these three countries vast areas of uncultivated and as yet uncultivable mountain and hill lands are made to pay rich tribute to tilled fields in all of the essential plant-food elements. This is done (1) through the large volumes of mountain and hill water, with its dissolved and suspended plant-food, used on the extensive rice-fields; (2) through the ashes religiously saved from the mountain and hill fuel and applied as fertilizers, and (3) through green herbage cut and brought down to be converted into manure by feeding, to be made into compost or to be applied immediately and directly to the field.

At the Nara Experiment Station, Japan, we learned that in that prefecture rice-fields are given, on the average, sixteen and thirty-two hundredths inches of water during the season in addition to the natural rainfall, which is itself large. A mantle of water was covering, at the time of our visit, more than fifty per cent of the cultivated fields in Japan. In Korea we had ridden through nearly four hundred miles of narrow valleys similarly laid out in small, terraced, water-covered fields. In China, from Canton north to beyond Shanghai and stretching westward up the great Yangtse River for a distance exceeding one thousand four hundred miles, similarly laid out fields were at the same time lying under water.

We were unable to learn the composition of many of the waters brought to these rice-fields, but if they carry as much plant-food as is found in the average river water of North America, cited by Merrill, 16.32 inches would bring to a field no less than 27 pounds of nitric nitrogen per acre, 8.86 pounds of potash, 1.07 pounds of phosphoric acid and 159 pounds of lime. If Japan's irrigation waters are as rich as these in plant-food, she must be bringing onto her more than ten thousand square miles of rice-fields annually something like 6,800,000 pounds of phosphoric acid; more than 56,000,000 pounds of potash, and a sufficient amount of nitric nitrogen to exceed that carried in 272,000,000 pounds of chemically-pure chili-salt-peter; and, as the ingredients here considered are all carried in solution in the water, they are in the form most highly available to crops.

It may appear to readers of this statement that the application of so much water to cultivated fields, especially in a climate of large rainfall, must result in more loss of plant-food to the field by soil leaching than can be brought in the water to them. But under the remarkable practices of these three nations this is certainly not the case and it is highly important that our people should understand and appreciate the principles which underlie the economic practices they have almost universally adopted in their paddy-rice culture.

By growing all rice thirty or more days in nursery beds and then transplanting to the fields, they not only save this time for use in maturing other crops on the ground, but they reduce by so much the time which it is necessary to maintain water over the rice-fields. The plants, too, have in this interval been brought to a strongly active growing stage, when they are able to begin at once the absorption of soluble plant-food from the water and to take up and transpire large amounts of the water itself, thus reducing the necessary drainage to a very material extent. Then the laying out of the rice-fields in perfectly level basins and the provision for thorough under-drainage from them, coupled with their wise judgment in applying water, results in nearly the entire water which comes to the fields, whether as rain or by irrigation, leaving it by underdrainage. By this practice the thoroughly aerated water, highly charged with oxygen and available plant-food, is carried slowly but surely over the active roots of the growing crop and these are the conditions of the highest possible efficiency. How perfect and effective this drainage is, is clearly demonstrated by the upper picture, which shows soy beans and pear-trees growing vigorously with their roots in soil completely saturated with water.

Almost no water leaves these fields by surface drainage, and here again is seen profoundly rational practice in the line of conservation of natural resources. With such practice every opportunity is afforded for taking advantage of the strong absorptive power of soil in retaining against leaching all soluble and available plant-food. With the rice-plants actively absorbing the plant-food from the soil they prevent it becoming overcharged and hence the plant roots hold the soil in a highly active condition which makes the

loss of potash and phosphoric acid, except through the removal of crops, very small. As a matter of fact, more water leaves the rice-fields by evaporation and by transpiration through the crop itself than is applied by irrigation, a condition which permits the plant-foods contributed to the fields by the water to be very completely used.

It is not alone when rice is on the ground that the cultural methods are made to conserve the soluble plant-food, for very often, where flooding is not practiced, the small fields, made quite level, are surrounded by a raised rim which permits not only the whole of

ings of this mud. It is even true that after the canal mud has been in the mulberry-orchards and accumulated there it will be carried bodily to the rice-fields and a corresponding amount of soil from these fields brought back, establishing in a sense a rotation of soils rather than a rotation of crops, and the amount of labor these people are willing to incur in thus transporting mud and earth is almost incredibly great.

We saw this practice first on our trip up the Si Kiang, or West, River, along its winding course through miles and miles of the great Canton delta fields, bearing rice on the lowest levels, bananas on the boundary and division dikes, and many thousands of acres of silkworm mulberry on the higher levels. One of my notes reads: "At quite regular intervals, all along the banks of the river paths lead down to the stream and, as I look up and down, I count in a quarter of a mile thirty-one men and women coming to or going from the stream, each carrying a pair of baskets on a bamboo pole across the shoulders, and those going are loaded with river deposits taken with a spade from just above the present water level. It has just begun raining, too, not hard, and the fields near and far have blossomed out like magic with people under great rain hats and kittysols where none were seen before."

Further north, in China and in Manchuria, where the rainfall is less and where methods of dry farming are practiced, enormous quantities of earth are used in the preparation of fertilizers which are annually applied to their fields or to their crops. In the Shantung province we observed a farmer applying a prepared earth compost to sweet potatoes being transplanted, at the rate of four tons per acre, and two of the four tons were treated soil, while the other crop of the year on the same ground might receive a like dressing, making eight tons per annum and per acre, four of which are treated earth.

In these drier countries the coarse organic matter decays too slowly if applied directly to the soil and interferes too seriously with the capillary movement of soil moisture, and hence something like two to four tons of soil or subsoil per acre of cultivated field is laboriously carried into the farm villages for use in the preparation of plant-food. Each household has its compost pit whose size is proportioned to the land to be served. In this all the animal manure, solid and liquid, together with the waste and roughage from the fields, are fermented under water during three to six months. Wheat and millet are even pulled by the roots and the roots are burned for fuel and the ashes saved or they are fermented in the compost pits. When such material has been thoroughly rotted it is removed from the pit, spread out upon the streets or threshing-floor, mixed with soil, and repeatedly stirred and turned, thus carrying it through the old process of niter farming until, by the fermentation of the organic matter, nitrates of potash and carbonates of magnesia and lime have been formed in the fuel ashes and in the soil, the final product being a fertilizer rich in humus and highly charged with all of the essential plant-food elements in available form. A large proportion of this earth compost is rendered air dry and finely pulverized so that it may be economically and evenly distributed in the field.

We puzzled a long time before we could understand how the farmers in these dry provinces were maintaining the humus in their soils, using as they do so large a per cent of the stems and roots of their crops for fuel and shipping out of the country considerable quantities of straw braid. But the riddle is solved, I think, by the large amount of organic matter which they ferment under water and which must result in the formation of a larger per cent of humus than would be the case if equal amounts of organic matter were turned under the soil to decay in the field, as is our practice.

We were unable to get definite information as to the amount of ashes which come to the fields of these countries from the mountain and hill fuel, but the annual aggregate must be very large. At the Nagoya Experiment Station, Japan, we obtained the estimate that in that prefecture the farmers apply annually about ten kan per tan of ashes, buying it at the rate of 60 sen per kan; which is equivalent to three hundred and thirty pounds per acre, worth twelve dollars, two tenths of which is derived from fuel grown on the cultivated fields. This amount of Japanese wood-ashes, figuring according to their published analysis, would add 38.6 pounds of potash and 12.8 pounds of phosphoric acid annually to the cultivated fields, eight tenths of which comes from the mountain and hill lands. The more than twenty thousand square miles of cultivated fields in the main islands of Japan are thus receiving from the uncultivated mountain and hill lands more than 1,693,000 tons of wood-ashes, thus carrying to their crops annually more than 395,000,000

[CONCLUDED ON PAGE 23]



Showing how crops other than rice may grow in saturated soils, if only the water is fresh and seeping through the soil, thus carrying sufficient oxygen to the roots

any rain to be held upon the field if so desired, but compels its even distribution over it, thus causing the whole soil to be uniformly charged with water, and preventing washing from one portion of the field to another. Very often, too, reservoirs are constructed, into which the excess water of a field is compelled to discharge, both by surface and under drainage. These reservoirs and all canals become, so to speak, storage places where large quantities of soil ooze, highly charged with organic growth, lie and decay and, by absorption from the water, accumulate all essential plant-food materials. Soil is even taken from the fields



The upper part of this engraving shows piles of mud brought up from the canal over the steps shown below, applied at the rate of seventy tons per acre. A grave mound stands on the naked field just beyond the fertilized field

to these reservoirs and canals to ripen beneath the water, but ultimately to be carried back, with much more with it. The canals and reservoirs have grown deeper and larger and the fields higher under centuries of this practice.

The second photograph (which was taken in two sections) shows a field which has just received canal mud at the rate of not less than seventy tons to the acre. In other places which we visited mulberry-orchards had been treated with quite as large dress-

ings of this mud. It is even true that after the canal mud has been in the mulberry-orchards and accumulated there it will be carried bodily to the rice-fields and a corresponding amount of soil from these fields brought back, establishing in a sense a rotation of soils rather than a rotation of crops, and the amount of labor these people are willing to incur in thus transporting mud and earth is almost incredibly great.



# Grafting by Grading

## The Strange Misadventures of the Wheat You Sell—By G. C. Streeter

TRANSPORTATION favoritism, discrimination, rebates and allowances have all been potent factors in building up and maintaining the Grain Trust. The advantages that accrue from regrading, dockage and treating of grain have been used to the loss of the grain-growers, but the chief instrumentality for the robbery of the farmer has been and, if the influence of the monopoly prevails, may again be the present method of grain inspection. In passing, I wish to impress the fact on you grain-growers that farm products are priced and graded by some one else. The unorganized farmers have absolutely nothing to say regarding the established prices or grade of the product they produce.

When a farmer drives to a line elevator with a load of wheat, he asks two questions: "What price will you give?" and "What grade will you allow?" But when he has sold his grain and becomes a buyer of goods for consumption, the tables are turned; his question then is "How much do you ask?" or "What is the price?"

In the report of Senator Dolliver in commending the passage of a bill for Federal Grain Inspection, made to the Senate on January 15, 1909, we find this very judicious statement of the situation:

"The producer, for the most part, is without any voice in determining the rules or regulations governing the handling or grading of his grain, the price of which is fixed by such grading, and helpless to reform or eliminate the many abuses, which have entered into the system of handling and grading grain at these great terminals, and which operate as both a fraud and injustice upon both the producer and the consumer."

At present the grain trade of the United States is controlled by four thousand members organized into boards of trade or chambers of commerce in the great terminal grain-markets of the country. These boards of trade absolutely control the grain-shipping interests of the country, regulating, so far as human combination can regulate a product subject to a world demand, both the price and grades that the millions of farmers in the grain-growing sections shall receive for their product and determining the quality of grain deliverable to the ten thousand millers of this country. They control the Inspection Department, both in its rules and in the appointment of inspectors and their continuance in office. They appoint, usually from their own membership, the board of appeals, who finally pass on questions of disputed grades. In the few states where the inspection of grain is regulated by state laws, the facts seem to be that the boards of trade dictate both the enactment and enforcement of the laws, and control the appointments made under these laws.

### The Masters of the Situation

But let us go a step further. Of the less than four thousand members of these different boards of trade a large number are people whose membership is nominal. Testifying before the Interstate Commerce Commission, Mr. E. S. Shields, elevator agent for the Milwaukee Railroad Company, testified that there were about fifty shippers of grain in Kansas City. "But the business is done, as every other class of business is done, largely by a dozen concerns." This was said of Kansas City, one of the most important grain-markets in the West; and it is equally true of every other terminal grain-market. A few active members of the board of trade are the power that controls the situation. Moreover, such concerns as Rosenbaum, Peavey, Shaffer, Armour & Company and Bartlett, Frazier & Carrington, have one or more representatives on the board of trade in every great terminal market in the country, and thus are able to bring about a profitable unanimity of action in all the big markets.

In most terminal markets the board of trade prescribes certain rules for the inspection and grading of grain. To enforce these they establish inspection departments. They appoint a head inspector and assistant inspectors who shall determine the grade of grain arriving at that terminal. Over and above the inspection department is an appeal department to which any member of the board

dissatisfied with grading may take an appeal. This appeal board usually consists of three members, who are appointed by the board of trade from its own membership.

Let us take the case of Kansas City again. The three members of the board of appeal on the first of January, 1909, were Mr. Alfred Weston, member of the board of trade; Mr. D. W. C. Bower, another member of the board of trade, and Mr. E. D. Townsend, foreman of the Rock Island Elevator and "grain hospital," operated by Bartlett, Frazier & Carrington. That is, the foreman of the "grain hospital" that mixes grain and reduces it to the lowest grade that will pass inspection is himself one of the final judges of the honesty of that grade.

Will you tell me what earthly show this gives a farmer who is dissatisfied with the grading of his shipment, when his only remedy lies in appealing to the people whose interests are directly opposed to his?

### Inspections Bossed by Boards of Trade

But this is no isolated case. The appeals committee from the Illinois State Grain Inspection Department is composed of men directly or indirectly connected with members of the board of trade of Chicago. This information also extends to the State Railroad and Warehouse Commission, which has long been made up of people recommended by combined grain-dealers, whose influences reach out and enmesh the men whose official co-



operation is necessary to their operations. In Illinois the entire State Railroad and Warehouse Commission appears to be simply an annex of the men who have control to-day over the grain trade of the country.

In St. Louis the appeal committee of the Missouri State Grain Inspection Department is composed of gentlemen directly or indirectly connected with the St. Louis Board of Trade, and in Minnesota you will find the State Grain Inspection Department working under the direction of the boards of trade controlled and directed by the same influences.

The situation is the same in every terminal market. When you come to study the situation, you find that a compact little coterie of grain-dealers absolutely control the inspection and grading of grain.

In 1898, Joseph Leiter, then young, rash and unsophisticated as to the power of this combine, attempted to run a grain corner independent of and in opposition to its policy. This is the celebrated corner in which Armour & Company and Peavey & Company broke young Joe and "badly bent his dad," all of which is another story, and simply introductory to the instance in point. During the progress of the corner a Duluth firm had sold Leiter two hundred thousand bushels of No. 1 Northern wheat. When it came time to deliver the wheat, they were unable to obtain any No. 1 Northern in Duluth, Mr. Leiter having cornered the supply. They thereupon shipped from the Peavey grain elevators, at Minneapolis, two hundred thousand bushels of wheat, which was inspected by the Minnesota Grain Inspection Department as No. 1 Northern. Remember, now, that Leiter had bought up most of the No. 1 Northern in sight and he had figured out that he was able to pay for and sell all the No. 2 Northern that could be delivered. Under the exigencies of the occasion this two hundred thousand bushels of wheat shipped out by the Peavey ele-

vators was passed and certified as No. 1 Northern. When the cars arrived in Duluth, the deputy inspectors refused to put a grade of No. 1 Northern on the wheat, on account of the poor quality. An appeal was taken to the chief inspector at Duluth, who also refused to grade the wheat No. 1 Northern. An appeal was then taken to the Board of Appeals, supposed to be the highest court so far as inspection at the head of the lakes is concerned. They absolutely refused to grade the wheat higher than No. 2 Northern.

Now, at this time, the difference in price between No. 1 Northern and No. 2 Northern in Duluth was six cents per bushel, making a difference on this shipment of one hundred and twenty thousand dollars, either to be paid by Leiter and made by Peavey of the Grain Trust, or to be saved by Leiter and lost by Peavey of the Grain Trust; but the Inspection Department of the State of Minnesota isn't run on any plan of letting a kid cub operator, who is trying to run an independent corner, save any money. The final court of appeals in the matter of contested inspection had passed on the matter and decided in favor of Leiter and against Peavey's wheat. Did that settle it? Not on your life! They had the case reopened. They had the Minnesota Inspection Department send a special trustworthy inspector to Duluth with instructions to grade this lot of wheat No. 1 Northern. It was



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so graded and Leiter was obliged to accept it and pay the No. 1 price. I presume the one hundred thousand dollars difference was one item "Pa" Leiter had to

figure in when he paid the bill for young Joe's first experience with the bears of the wheat pit. Not that we care particularly about the losses either to Joe Leiter or his dad, as the old man seems to have enough money left to keep him several degrees removed from the poorhouse and to buy ducal coronets and other foreign gewgaws for a large and flourishing family of daughters but it illustrates exactly the power of the Grain Trust in the Inspection Department of the State of Minnesota—a power that can corrupt an honest department or overrule it when it cannot be controlled.

### A Few Grain Trust Tentacles

It might be interesting to know what influence was powerful enough to overrule the decisions of the inspector, the chief inspector and the Board of Appeals at Duluth, but when you have studied the power of the Grain Combine as long as I have and found repeated instances at their control of the machinery of legislation and justice in great states, when you find them dictating the nomination of governors, dominating the policy of railroads and even influencing the appointment of cabinet officials, you begin in some measure to appreciate their vast powers.

It is established beyond possibility of contradiction that there exists a system of what is known as early and late inspection. It is the custom for grain inspectors to be very severe in their requirements during the first month or two of the crop year. Inasmuch as a large part of the wheat crop is sold as soon as thrashed, this discriminates severely against the farmer who from lack of storage facilities or from need of money is obliged to sell the crop as soon as it is made. Their grain receives the lowest grade and stands the largest possible

dockage. This same grain after being purchased by the dealers may pass into a line elevator and onto the terminal elevator, subjected to an easier inspection and shipped out at a higher grade. The elevator combine makes the difference between the grades, and the poor farmer, whose necessities compel him to market his grain early in the season, is the loser.

On April 17, 1899, a committee from the Minnesota Legislature reported as follows:

"From the investigation before this committee, it clearly appears to this committee that wheat inspection has not been uniform throughout the year. That the grading of wheat has been rigid during the first three or four weeks of each season and less rigid during the balance of the year, and we cannot in too strong language condemn this practice, as it must necessarily result in a great loss to the producer from the fact that a large proportion of the crop has been marketed before the change takes place, and on all the wheat sold prior to that time the loss must necessarily fall upon the producer. No good reasons have been produced by the departments of inspection in the testimony taken before this committee that the system in vogue in the department can result in anything but a dead loss to the producer and must necessarily be to the advantage of the buyer."

Senator Dolliver in his report, commending the passage of the bill to establish federal grain inspection, says:

"Practically all grain passes through one or more great terminal markets before reaching the consumer. Its value is fixed by the grade that is placed upon it at such terminals. Under the present system, whether under state laws or boards of trade rules, the parties in interest as purchasers at the great terminals dominate and control all rules governing the handling of grain, its inspection and grading. That such rules should be in the interest of the terminal purchasers under such a system is not surprising.

"The appointment of inspectors and the fixing of grades are under the control of the boards of trade. The relation between the inspection and the grading power and the purchasing interest is most close and intimate.

"Appeals from the decision of inspectors are almost invariably taken to a board of appeals composed of persons who are either directly or indirectly interested in the purchase of grain, from the inspection of which the appeal is taken.

"That the inspection and grading departments at these great terminals are subservient to and dominated by the great elevator interests is established beyond a question.

"As a result of this domination and control has grown what is known as a system of rigid and easy inspection—that is, rigid inspection into the elevators and easy inspection out.

"This enables the terminal elevators to buy in the grain, generally at a grade less than its true grade, mix it with other inferior grain and sell the same out at a grade higher than the true grade, thereby making the value of two grades.

"The result of this system is that the producer and independent shipper are beaten out of one grade of grain."

It is interesting to figure what this system of rigid and easy inspection means to the farmers. In 1905 the farmers of Kansas produced eighty-one million bushels of wheat. If the system of rigid inspection in buying causes them to lose one grade, these farmers suffered a loss of two and one half million dollars, as the difference in the price of a grade—that is, the spread between No. 2 and No. 3—would average not less than three cents a bushel.

The entire wheat crop for 1906 was seven hundred and twenty-five million bushels. This would mean a loss of upward of twenty-two million dollars on one single cereal crop. Is it any wonder that the combined grain-dealers wish to regard the present method of grain [CONCLUDED ON PAGE 22]



# Where the Hedge Fence Fits In

## By T. Greiner

AS A poultry-keeper I find evergreen shelter belts north or west of the poultry-yards and houses, as also clusters and thickets of evergreens, decidedly useful and convenient. I often envy some neighbor the possession of a shelter belt and considered it an unwise move on the part of one neighbor when he cut down a double row of close-planted evergreens which had made his hens comfortable outdoors during the milder winter days for years when most other people's hens had to be kept closely confined inside. But I have the evergreen clusters and thickets not far from the hen-houses, and here the birds can congregate and dig and scratch.

As to hedge fences, however, I can not say that I am particularly "stuck" on them. Their avowed purpose is twofold, that of protection and of ornament. If you have plenty of land and some to spare, and plenty of time to keep such fences in trim, you may indulge in the luxury of maintaining them. In most cases they are not properly looked after, and more of a nuisance than a comfort to the owner.

Common growths, sometimes used for division fences or more usually for ornamental hedges, sometimes useful and sometimes a reproach, and at best requiring constant care and pruning, are Norway spruce (*Picea excelsa*) and American arbor-vitæ (*Thuja occidentalis*). A hedge of common hemlock (*Tsuga Canadensis*) can be made particularly beautiful and striking in effect. Neither of these, however, are as suitable for a hedge to turn stock as osage orange further south, or honey locust in the Northern states. With either it takes but a very few years to grow an effective barrier between two fields or farms. The honey locust (*Gleditsia*), if kept severely cut back, makes an almost impenetrable hedge, but most of them that I know of are ragged and neglected, and far from ornamental.

Henry Ward Beecher, I believe, was given credit for the saying: "The best smell is no smell." To a neighbor, who asked me the other day about the best plant for a hedge to divide his suburban home lot from the one adjoining his, I said: "Why a hedge? The best hedge is no hedge." To keep an ornamental hedge in the shape it ought to be

shoe, or the closed fist upon the eye, as the Germans say. The man is a well-to-do city merchant. He can afford to have his hobbies, and he has them, very desirable and praiseworthy ones, too. He is a straight fellow and loves regularity. A grove of shade-trees running in straight rows through the center of the three-quarter-acre lot, induced him to purchase the premises and build a house on that spot. Fruits and flowers



The New Hedge

he has set in the same regular straight rows, with every inch of ground occupied.

He enjoys the companionship of his floral and vegetable pets. He likes to show them to his friends and let them share in this enjoyment. But he wants no uncalled-for interference. He does not care to have the dogs or hens of the neighborhood congregate on his front lawn or in his flower-beds in the rear. There is a good wire fence along the west and north sides, and along the two streets the hedge, reinforced with a strip of poultry-netting through the center, even at this time when only two feet in height, effectually serves as a warning to the trespassers: "Keep off." It tells him, and to the public, in a vivid man-

this partially filled with good loam, a mixture of woods earth, old compost and clay loam. In this the plants were carefully set in two rows a foot apart, the plants in each row being also one foot apart, but not exactly opposite, each plant in one row standing midway between the two nearest plants of the other row. When the trench was filled with the prepared soil, the stem of each plant was covered clear to the branches.

The strip of poultry-netting was placed between the rows as already mentioned.

Some digging was done around the young plants during 1908, but the main and most effective treatment was the application of a good mulch of old manure, chip-dirt, etc., and occasional watering in dry weather from the hydrant. Then, in 1909, a little more digging was done, and along in the summer, when the sod began to encroach upon the strip occupied by the plants, a narrow strip was spaded up on each side to the depth of a few inches and the loose soil thrown against the rows. The tops were clipped twice, giving the hedge the desired square shape. A cluster of older and larger plants was set at each side of the entrances, to serve as a sort of sentinels. It would have been better, however, to use the one-year plants in these places, and to depend on extra stimulating and proper trimming for giving them the desired shape. The second picture was taken in 1909, after the completion of the season's growth and shortly after the second cutting back. The owner is greatly elated over his success and the picture shows that he has good reason to be.



The Hedge the Year After

kept requires lots of care and labor and some skill, and if it is not kept in such a shape, it is not an ornament, but a disgrace. The hedge is a living sign: "Keep off the grass!" It lacks the elements of hospitality and of informality. It looks forbidding and gives the stiffness of straight lines, instead of the grace of curves. Why a hedge?

In winter-time, too, it may give us serious trouble. A day or two ago I was tempted to take another photograph of the premises shown in the accompanying pictures, to let the reader see how they look just after a snow-storm with a western gale, when this hedge, although not over two feet high, acts as a windbreak, and the snow piles up, and keeps on piling up, just beyond the hedge on the side-walk.

With all these drawbacks, however, there is a place for such a hedge. My next-door neighbor, whose premises are shown in the pictures, is just the man and his place just the place to have it. The hedge fits into the entire character and peculiarities of the man and of the place as the foot fits into a well-worn

ner where the rights of the public end and where his own exclusive jurisdiction begins. Here is eminently and evidently the right place for a hedge of this kind.

For his hedge my neighbor wisely selected the California privet (*Ligustrum ovalifolium*). It is midway between an evergreen and a deciduous shrub, quite hardy here in western New York, and nearly faultless for this purpose. The planting was done in 1908 and the one picture was taken in the latter part of that year.

In the selection of the plants and in their setting, the utmost care is required. One-year-old plants, nursery-grown, are undoubtedly best. Reject every one about the soundness and freshness and vitality of which there is the least doubt. You want your hedge without a break or flaw. My neighbor contracted with a local nurseryman who agreed to furnish the plants for forty-five dollars a thousand and attend to the proper planting, guaranteeing the plants to live. A trench was dug along the line of the proposed hedge, about a foot in depth and nearly a foot and a half wide, and

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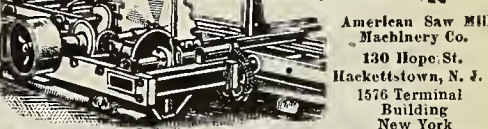
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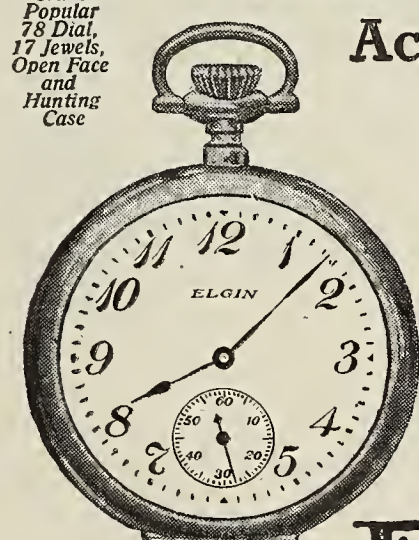
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## Fruit-Growing—By Samuel B. Green

### Fig-Bush Not Bearing

A READER at Franklin, Virginia, has a fig-bush, but no figs. Few varieties of fig are grown successfully in the Southern states. Black Turkey is one. The non-bearing of some varieties of figs in this country is something of a mystery to those who are most expert with them. The experience of fig-growers in California has generally been unsatisfactory with the varieties grown most successfully in portions of the old world. It is stated on good authority that at Fresno and in a few other places in California, by the introduction of what is known as the "fig wasp" (*Blastophaga*) and the growing of the wild caprifig in the vicinity, they have succeeded in ripening some of the better forms and overcoming the common fig troubles referred to.

Some figs, at least, must be fertilized by this wasp, or they will not produce good fruit; after the fruit is perhaps half-grown it will drop off. The flowers of a fig are on the inside, and each seed represents a flower. It, therefore, takes hundreds of flowers to form a single fig. There is an opening at the end of each fig through which the fig wasp crowds its way, carrying with it pollen from the wild caprifig.

I would suggest that if you are interested in experimenting further along this line you take it up with the Bureau of Plant Industry, United States De-

partment of Agriculture, as they have made a very considerable study of this feature of fig-raising.

### Care of Old Orchards

Mrs. J. E. W., Salisbury, Maryland—You state that the apples rotted badly in your orchard and many fell off that seemed to be stung and had hard spots on them extending into the fruit. I think the rotting was due to bitter rot and that you will find considerable bitter rot canker on the trees. This disease lives in the bark on the twigs and bigger branches, and forms big, rough-looking growths. From these growths spores come in the spring or summer that infect the apple. Cut off the diseased wood and burn it, then spray the tree and fruit as soon as the blossoms have fallen with ordinary Bordeaux mixture. This should be repeated at intervals of about three weeks throughout the growing season.

The hard spots were probably caused by the stinging of the apple or plum curculio. This insect will yield to spraying with arsenate of lead. Begin spraying soon after the flowers have fallen, and repeat often enough to keep the fruit covered with the arsenate. In practice the thing to do is to combine these two sprays and apply them at one time. Not only will this protect from the insects referred to, but also from the codling-moth, which makes what is known as "wormy apples."

### While Waiting for Fruit

W. A. Gould—You state that your land, located in Western Colorado, is a rather sandy loam and now in a raw sage-brush stage; that it is at an altitude of about six thousand feet and must be irrigated; that you expect to plant an apple-orchard; and you ask if it is advisable to grow potatoes or other crops on it for a few years until it is subdued, or whether it would be better to plant the trees and keep the land cultivated with no crops between the trees. If the land is in such shape that it can be irrigated, and if it has been carefully plowed, dragged and brought into good condition and the trees are at proper distances, there is no objection to raising garden crops between the trees. Such soil is generally rich and only lacks water, and there is no reason why these crops should not aid in the expense of caring for the orchard until it reaches the productive stage.

If, however, the land was not irrigated, in reply to the same question with this condition, I should say that it would be best to keep the soil thoroughly cultivated between the rows and not grow crops there, for by this management you would preserve the moisture in the soil better.

### Top-Working Large Apple-Trees

J. H. S., Ionia, Michigan—You ask if you can graft this year on the stubs left on your large thrifty apple-tree after trimming last autumn. This would all depend upon what the stubs were like. As a rule, we do not get first-class unions on large stubs, and it is generally best to trim back the tree for grafting in the spring at the time the work is done; if done in autumn, the stubs would probably need some further cutting off in the spring. I prefer to graft on branches not over one and one half inches in diameter, and get best results on branches smaller than this. In case scions are set in large stubs they often make a tremendous growth, but do not form a good union, and the branches growing from the scion often break down, and even the scion itself may break out of the stub.

Peach buds may be sent by mail the same as the buds of apples, pears, plums, etc., and will generally keep for a week or more, even in warm weather, if kept cool. The buds are not cut off of the twigs, but the bud sticks, which are the twigs with the leaves removed, are sent on for use in budding.

### Golden Willows From Seed

L. T. G., Valley City, North Dakota—I do not think the Russian golden willow produces seed in this country. I think it a form of the white willow which only occurs in its staminate form. The seed of the willows and poplars is very delicate and must be sown soon after it is ripe. But few attempts have been made in this country to grow either the willow or poplar from seed and, so far as I know, these are limited to growing

the cottonwood by cutting off the branches having the pistillate catkins on them just before they are ready to open and scattering them loosely along in a furrow. When they open, as they soon do when exposed to the weather under such conditions, the seed is carefully raked into the ground, which is kept moist. This is really an imitation of Nature's way of growing willows and cottonwoods from seed, which is so often successful on the sand bars along our Western rivers.

### Apple-Trees, But No Apples

M. A. B., Fulton, Ohio—You state that your apple-trees, Baldwins, Grimes' Golden and others, have been planted fifteen years, make a thrifty growth, but do not bear fruit. It would be necessary for you to give me more data in order that I may answer intelligently. For instance, what kind of a location is it in which they grow—high or low, as regards the surrounding land—whether the trees are so thick together that they shade one another and whether the soil is cultivated. From your description, the soil must be very rich, and this of itself would have a tendency to bring on late bearing. It is possible that the flowers are killed by late frosts—that your trees are growing in a frost pocket.

Try girdling a few of the trees as an experiment. This will have a tendency to check their growth and probably force them into producing fruit buds, while now all their strength goes to leaf buds. This should be done by taking out, in the latter part of May, a ring of bark, three quarters of an inch wide, entirely around the trees about one foot above the ground. This will grow over the first season, but will probably have the effect desired. As a rule, I do not believe in girdling trees, but I have sometimes practised it with tardy-bearing varieties to advantage. If, however, your trees produce flowers each year, but do not set fruit, this will not help them.

### Short Roots for Cold Regions

Experience in New England and the Pacific Coast states plainly shows me that it matters little how apple-trees are propagated in a section where the climate is not severe, and that a budded tree is just as good as one grafted on a whole or a piece root in such sections. However, in Minnesota, the Dakotas and a large portion of Montana, the results are not so uniform from the different methods of propagation. For that section the best apple-trees for planting are those worked with a short root and a long scion, for in this way the roots which are tender, having been grown from seed, are put deep in the ground and protected. Whole roots bring the graft near the surface of the ground, where it is most liable to be injured. Whole root trees or budded trees can be used even in this section, but before planting them out, it is desirable to cut the root back severely and then put it well below the surface of the ground.

### Root-Galls

I should dislike and should avoid planting trees that had knots on their roots, which seem to indicate the so-called "crown" or "root-gall." I know, however, of an orchard that was planted out by a friend of mine just to test this feature. The trees selected were all so infested. The orchard has been planted perhaps ten years and seems to be doing as well as it would have done had the trees been selected according to our best standards. I should not regard stock so infested as first class and should refuse it; nevertheless, the facts that have come to my attention are as stated.

### Longevity of Willow Posts

P. Wolf, Arrookee, Maryland—In my experience white willow posts six inches in diameter at the big end, that have been peeled and dried, will last five to seven years under ordinary conditions in well-drained soil. I think in this respect that our ordinary wild willows will compare favorably with the white willows.

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# Gardening---By T. Greiner

## Raspberries for Pocket-Money

**A** PEARL, Michigan, reader asks me what are the best varieties of black raspberries, how and when to plant, and where to procure good plants. He adds: "I am desirous of putting out a patch to try and get a little pocket-money, as my uncle has offered me a piece of ground." Good for the uncle! He is doing his nephew a greater favor than he would if offering him the pocket-money outright. He gives him the chance and says, "help yourself."

Raspberries, either red or black, are not a difficult crop to grow. If our young friend can market them fresh at Allegan or at Grand Rapids at prices usually paid for berries in such places, he can earn a fair supply of pocket-money quite readily. I find red raspberries even more profitable in my vicinity than blackcaps, although they are subject to some troublesome diseases, for which we know no remedies at present. Buy your plants from any reliable nurseryman or neighboring grower, selecting standard varieties, like Gregg, Kansas or any other the market calls for. Prepare your land well. It should be a warm loam, well drained and in condition to produce a fair yield of corn. Mark out rows six or seven feet apart and set the plants about four feet apart in the rows. Use any common cultivator freely to keep the soil loosened and free from weeds. Hoe between the plants in the rows. The young canes should be cut back more or less every year to induce them to branch low and make a self-supporting bush. The laterals may then be cut back, in spring following, to twelve or eighteen inches in length. You will get a little fruit the second year and perhaps close to a full crop the third.

## Some Truck-Farm Profits

An acquaintance of mine grows many acres of celery, both early and late, on muck land near South Lima, New York State. He sets his late plants five inches apart in rows four or four and one half feet apart and blanches by earthing up. He plants only Golden Self-Blanching, applies one thousand five hundred pounds of commercial fertilizer per acre, sells the whole crop during the fall, finishing off before winter and, after paying about one hundred and thirty-two dollars per acre expenses, has one hundred and eighty dollars left as profits.

The early crop is partially grown under canvas tents, on the close-planting system known as "the new celery culture," and at a cost of seven hundred and sixty-four dollars and fifty cents per acre. He figures out a net gain of one thousand one hundred and ninety-six dollars per acre.

Lettuce is a gambler's crop, says my South Lima friend. He plants Big Boston only, on muck land, at an expense of one hundred and thirty-one dollars and seventy-five cents per acre. His average sales amount to about two hundred per acre, leaving a net profit of sixty-eight dollars and twenty-five cents. Nothing so very tempting in that for the market gardener.

The same grower secures an average yield of about six hundred bushels of onions on his muck land, of course by the old system of onion-growing. The expenses of the crop are one hundred and twenty-three dollars and fifty cents per acre. The average price obtained for them is forty cents a bushel, or two hundred and forty dollars for the whole crop, which leaves a profit of one hundred and sixteen dollars and fifty cents per acre.

## Making a Hotbed

Several calls have been received for instructions for making "a simple hotbed." First, of course, you want some sash. This may be a regular "business" hotbed sash such as market gardeners use and can be purchased ready made from regular manufacturers and advertisers—with single or double glass. A large window or two may be used in an emergency, but the safer way is to use the regular article, three feet wide and five to six feet long. Make a frame or box to fit whatever sash you have. I prefer to make an excavation a foot or more in depth, to be filled with fresh horse-manure that will ferment and heat up the bed soil placed on top of the manure and keep it warm enough for safety even in somewhat cold weather. The frame may be placed directly upon the

manure or stakes may be driven into the ground and the planks for the frame nailed to them. The rear of the frame, at the north or northwest, should be four to six inches higher than the front. Fill the manure in and pack it well down, then cover it with about four or five inches of good loamy soil, so as to bring it within five or six inches of the sash with which the frame is to be covered at once. In a few days the soil should be nicely warmed through and seed may be sowed. Give water as may be needed and air by lifting the sash, according to the weather. In all these things experience will be found the best teacher.

## Treating Potatoes for Scab

E. I., a Pennsylvania reader, complains of his potatoes being scabby every year. This disease is dreadfully infectious. Your soil is probably full of the spores and no treatment you might give the seed-potatoes would save them from scab in a season that favors it. Try to find another spot for your potatoes, if possible a piece of new clover-sod. Or raise a green crop of some kind—peas, cow-beans, crimson clover or even rye—and plow this under, for the purpose of making the soil slightly acid.

If you are reasonably sure that there is no scab infection in the soil, then treat your seed-potatoes with formalin or the corrosive sublimate. Probably you can get the latter more easily in the small quantity needed. Buy an ounce of corrosive sublimate (bichlorid of mercury) and dissolve this in a gallon of boiling water. Then add water enough to make seven and one half gallons. In this very poisonous solution immerse the seed-potatoes for about ninety minutes. Then let them dry, after which cut and plant them. The formalin treatment is similar to this. Let no stock get hold of the treated seed-potatoes.

## Early Celery Bolting

J. C., an Oregon subscriber, tells me that he has suffered much loss by his early celery going to seed. One year he sowed seed on February 20th, another time the first of March and his early White Plume crop was nearly an entire loss. Italian and Belgian gardeners, he says, recommend sowing in the dark of the moon, but he has little faith in that. For myself, I have so little faith in it that I do not even keep track of the moon phases. I plant when I get ready or when I consider it the proper time and usually get my crop all right. A few White Plume plants will occasionally "bolt," and apparently, the more of them, the earlier we sow the seed. I have never yet noticed this tendency in my newer favorite, the Chicago Giant, nor much in its relative, Giant Pascal. In fact, I believe that it is more due to a weakened strain of the variety, especially White Plume, than to any other single factor. Last year I made repeated sowings of the Chicago Giant and must have hit all phases of the moon; but no plant attempted to produce seed. I like to secure French seed, but this year we can only obtain Chicago Giant seed grown in California. How that will do remains to be seen.

## Celery Suckering

A. L. M., a Kentucky reader, wonders whether some varieties sucker more than others, also whether it be advisable to pull the suckers off or leave them on the stalk. Yes, there is a decided difference in varieties. Years ago we used to raise Boston Market. Some seedsmen still list it. It suckered badly and we had to go through the patch repeatedly to remove the suckers. Our newer sorts seldom produce offshoots. I have never noticed any on Giant Pascal or Chicago Giant, which seems to be of the same blood.

## Sticky Clay Soil

The Rochester, New York, reader, who asks how he could best treat his garden soil, a sticky clay, so as to make it more managable, has a hard task before him. He asks: "Would you advise throwing our sifted coal-ashes on it? I am advised to use sand, but this would make it rather expensive." I imagine that the improvement has to come little by little. If you have enough coal-ashes to add to the soil, you can improve its texture, most assuredly, but I would prefer to use a good deal on part

of the garden, rather than spread a little over a big area. The smaller part of the garden might be treated by additions of ashes, sand, manure, etc., and thus fitted for immediate use, while the other portion be sowed to mammoth clover, this to be plowed under for the purpose of filling the soil with humus and vegetable fiber. It will require effort and time, but if the patch is well drained, there is no reason why it could not be brought into fairly good condition for most garden crops.

## Radishes and Radish Mixtures

Some seedsmen offer a mixture of many varieties of radishes, under the claim that you will have to plant only once and have radishes right along all summer. I prefer to plant the quickest growers among radishes, such as Earliest Scarlet Forcing, Turnip Rooted, White Tipped Globe or one of a number of others, get them to give a crop within four or five weeks' time from seed-sowing, and then clear the patch within a week or two, making sure of having another lot ready by the time the first is gone. This plan gives the maggot and other troubles, especially the black rot (root rot) less chance than when we string the crop along for months. We work on the plan of "small profits, but quick returns," as also on the principle of frequent renewal and succession of crops. I just like the chance to turn the soil completely over from time to time. It helps toward cleanliness and freedom from weeds.

## The Big Japanese Radish

The Mammoth Japan, or "Sakurajima," radish is most likely a winter variety. In Thorburn's catalogue the directions say: "Sow it early." When I followed them a year or two ago, I got a small tough root, lots of top and a big seed stalk. So I discarded it. Yet I now learn of many instances of radishes having been grown to weigh a dozen and more pounds each, and they were reported to be quite tender and palatable. The successful growers advise late sowing, however, along in July as we usually sow our winter radishes. So I included this giant radish in my seed-order again, to try as a winter sort. I like good winter radishes, and they are easily grown.



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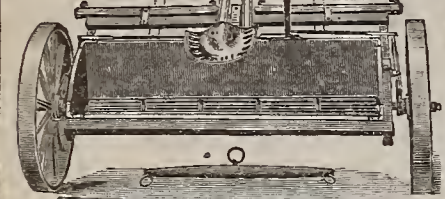
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## Garden and Orchard

### Why and When to Prune

THE time to begin pruning an orchard tree is when it is in the nursery. Again at time of setting the young tree should be given more definite shape. The old saying, "as the twig is bent, so the tree is inclined," is true with orchard trees. Although each particular species and variety has its natural habit, the wise pruner can pretty much determine the shape.

The height of the trunk is the first thing to consider, and this depends on the climate and the variety under treatment. Low heads are the rule now in nearly all sections, as low as three feet to the first branch, in the West. The framework of the tree is the next thing. If this has been properly started only an occasional branch will need removal. The main branches must be developed to hold up the weight of fruit and leaves that a healthy tree should have.

While the head of a tree should be sufficiently open to allow the free circulation of air and an abundance of light to color the fruit, too many orchardists are apt to cut out too freely when the trees are young, not realizing that as they get to bearing age the weight of fruit will cause their branches to spread. A rather close-headed tree will be decidedly less so as it grows older, and the pruner should bear this in mind. All the cross branches should be cut out as soon as discovered, for they will get more and more injurious to the others, as well as to themselves. Every branch should grow away from the center of the tree, instead of toward it. No two branches should be allowed to rub against each other or to grow so close as to be in danger of doing so when bending under a weight of fruit. Ordinary judgment will decide which branch is to be cut away.

One very common mistake is made by those who are taken suddenly with the notion that they must clear out their trees. It is the cutting off of all the small branches, twigs and spurs from the lower limbs and the interior of the trees.

Bare branches are not the proper thing until the shade of the trees causes them to be so, and with moderate and judicious thinning the branches may retain their spurs for a long time. These often bear good fruit, and they also serve a good purpose in strengthening the growth of the main branches and shading them from the sun. Some fruit-trees have very upright habits of growth and need to be headed back. This is often true of the pears, the Kieffer being one of them. There are others which are too spreading or even drooping and need guiding to more upright growth.

When it becomes necessary to cut off a branch, let it be done decently. One should not make a cut an inch or more above the last bud left to make the growth; the wood will die back to the last living bud in every case, leaving a dead snag if that bud or branch is not at the extreme end. If the cutting is done right all that it will leave will be a slight scar.

When larger branches are cut away there should be no snags left. Be the snag ever so short it will die back to where the circulation of sap is active. Notice a year later the two kinds of cuts after Nature has tried to heal the wounds. Where snags were left by the pruner (more correctly, the tree butcher), they are dead, and kindly Nature is trying to heal them over. In course of time the dead parts will rot away if the new growth does not first cover them; but there will be a rotten blemish in the tree. Where the cuts were made close to the main stem, the healing process is going on rapidly, and in one more season will have covered the wounds completely.

When a large horizontal branch has to be cut off it is well to saw first on the under side and then finish from above. This will prevent the weight from causing a split in the trunk where the cut is made, as is almost sure to result where it is begun at the upper side. All wounds over an inch in diameter should be covered at once to prevent cracking and decay. Any good paint, the thicker the better, will do.

The best tools for pruning are a sharp pruning-knife, a wide chisel, with a mallet to drive it, and a narrow-bladed saw. There are regular pruning-saws made, but a medium-sized butcher's saw, changed to cut wood, is about as good. The narrow blade, set wide and filed sharp, will do the work more quickly and easily than a wide blade, because there is less friction. With one chisel with a short handle and another long enough to reach well into a tree much labor can be saved by working from the ground. A blacksmith can make a good pruning-chisel at small cost. They should be drawn to a thin edge from both sides. Pruning may be done at almost any season, but early spring seems to be the time when there is the best opportunity for farmers. But, whenever it is done, let it be with a helpful, intelligent spirit, and not in a thoughtless, hurried way, as is far too often the case.

SYLVANUS VAN AKEN.

### Kohlrabi

THIS excellent vegetable is not as well known in the farm garden as it deserves to be. It is easily grown on most soils, though a light loam, not too fertile, is the best. It may be planted in the early spring and in succession every two weeks until summer. Many like it for cooking better than the turnip.

My plan is to plant the seed thickly in rows, similar to radishes, about fourteen inches apart. When the plants are in the fourth leaf I take out of the row what I care to transplant. Then I thin the remaining plants to stand about eight inches apart. These make nice bulbs in due season.

In transplanting, the plant must not be set very deep, only a very little deeper than they grew in the bed, or the bulb will form in the ground, which is not good for it. The cultivation is the same as for cabbage. The ground about the plants must be kept mellow. It should never be allowed to form a hardened cake on top after rains. The bulbs do not stay in good condition long after maturing, so it is wise to plant a succession as suggested.

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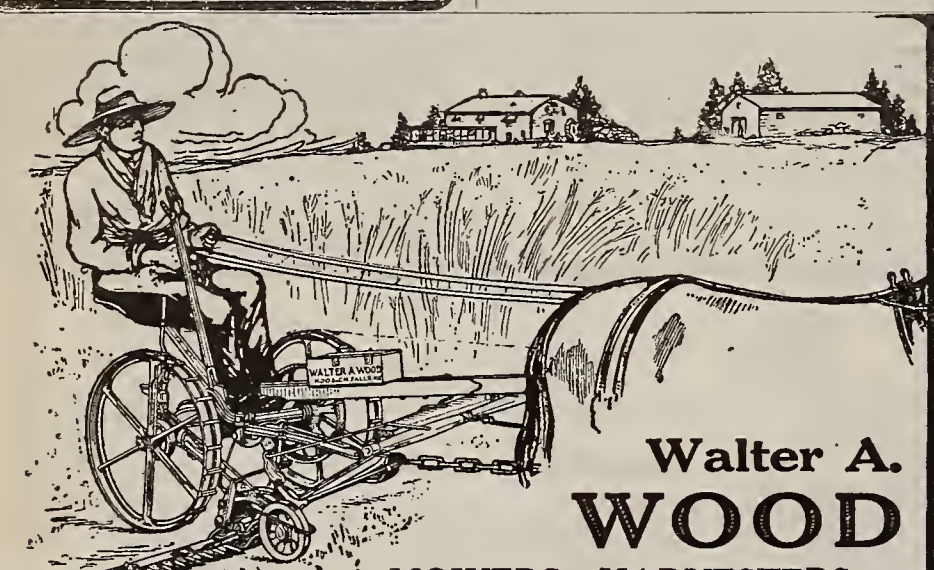
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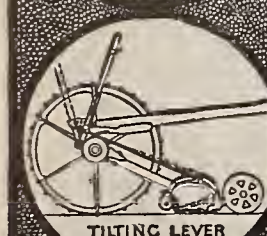
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# Garden and Orchard

## The Fairfax Squash

THE quest for a new squash that shall be of the best quality, reliable as to uniformity, usable early and late, and a good keeper is a continuous one. The seedsmen desire it; the home grower is far from satisfied with what we have. Several are good enough, at their best, but none is uniformly good.

Last spring the Fairfax Squash was offered by a supposedly reliable seedsman as the most prolific squash, the equal of any in quality, virtually bug-proof and, all things considered, "the best squash in the entire list."

The photograph shows some of the variations in form which the season's growth showed. Not one was like the



Erratic Squashes

type pictured in the catalogue. It proved a good grower, prolific and kept excellently. But the quality is poor in every characteristic except sweetness. The varying forms shown in the picture might lead one to believe it a cross between a summer scallop and a pumpkin, and the quality, as we have it, does not belie this suspicion. We have not, as yet, seen anything in the coarse-grained, unpleasantly-flavored specimens to make us want to grow it again. C. S. VALENTINE.

## A Place for the Kieffer

MR. GREINER's article on pears in your January 10th issue, well befits conditions in western New York, as I know by experience, but here in Ohio, as over a large territory elsewhere, it is a different proposition. If I were located, as Mr. Greiner is, where Bartletts, Clapp's Favorite, Anjou, Lawrence, etc., can be grown so well and are not so much subject to blight, I would hardly plant the Kieffer; for truly, to eat out of hand, a ripe Anjou or Lawrence is incomparably better than a Kieffer of the same season. And yet, here in Ohio, because we cannot grow these finer varieties profitably, we have learned to grow and handle the Kieffer to bring out their qualities.

Well-grown and well-ripened, there is only one of these finer-quality pears that surpass, if, indeed, more than equal it, and that is the Bartlett, aside from which I know of none other to equal it for quality when canned, if canned when ripe. The hard green Kieffers that are sold in stacks at many groceries here each autumn are far different from the ripe Kieffers as we grow, handle and market them—so different that we have worked up a fine trade among our customers in Kieffers as they should be. Instead of using these hard or wilted-before-they-are-ripe pears, they have learned to wait for our home-grown, properly-ripened Kieffers, often believing them to be a different variety.

As people are becoming educated to using them, I have no fears that the planting of them has been overdone here. We market them, ripe, over a long period and the handling of them comes at a time when the work need not be done all in a hurry. We planted three hundred and fifty Kieffers, with only a few others, because they would not interfere with the handling of the earlier fruit and because they represented sure profit to us.

We are now putting in a few Seckels and Angoulemes (Duchess). This last is a better eating pear than Kieffer, though inferior for canning, and keeps quite a while, while Seckel, though small, is fine for pickling, and both are little subject to blight. We are also trying a few Lincoln, Snyder, Koonce, etc., but as for those, with us, blighters, such as Clapp's Favorite, Bartlett, Sheldon, etc., we would rather not have them on the premises as long as we cannot better control the blight. C. WECKESSER.

## How Many Onions?

SOME time ago, I saw in your columns, a statement of how many onions could be raised on an acre. The writer said from seven hundred to one thousand bushels per acre wasn't uncommon. I think it is for this zone. The kind he recommended was all right, Prizetaker, Improved Yellow Globe Danvers and Large Red Weathersfield, three and one half to four pounds of seed per acre. But, that yield sounds like one of the dreams in a modern seed catalogue.

For the past five years I have raised, on an average, five hundred bushels of onions from one and one half acres of land and sold them for \$1.00 per bushel. The lowest yield was two hundred and

eighty bushels and the highest seven hundred and forty on said one and one half acres.

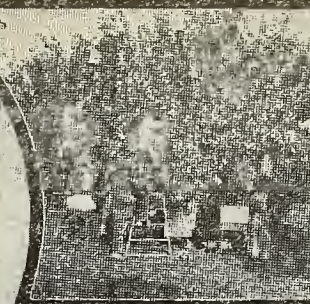

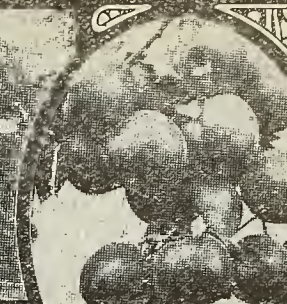
This is the method I use, worked out after eighteen years' experience raising onions. The land should be creek bottom or black sandy loam; haul about four to five tons of old hay or bunch grass onto each acre, spread it out even and burn and plow under the ashes immediately ten inches deep. Harrow both ways until fine and level. Make a marker which takes two boards ten feet long, with markers made of two by four, two and a half feet long. Cut these into the shape of runners and nail them one foot apart, a handy width for wheel-hoe cultivation. Run a chain or good rope to each end of marker and put clevis in middle, and hitch on two good horses. It needs two men to ride this marker, as it needs weight to press it down firmly. The driver should stand to the side of the guide row. This gives a firm seed-bed and easy to drill, putting seed about two inches below the surface. Cover seed about half an inch. We can sow by the twentieth of March here in Rooks County, Kansas, as frost will not hurt the seed.

The burning of old hay kills weed-seed and many worms, cutworms or onion-maggots. Cultivate every seven or ten days, which keeps a dust mulch and retains all moisture. E. E. ALLEN.

A thousand-bushel crop of onions to the acre is not what every one gets, but it is no more mythical than hundred-bushel corn. Under the "new onion culture" which Mr. Greiner has described, in our columns, it is no more than a careful grower should expect. As for results by ordinary commercial methods a correspondent states that on Walker's Island in the Missouri, near Sioux City, "Four hundred bushels is a small crop to the acre. Five hundred to seven hundred are commonly raised, and I shouldn't be surprised if, many times, one thousand bushels, or even more, had been raised." EDITOR.

## The Ground-Cherry

OUR friends who wish material for delicious pies should get a packet of ground-cherry or husk-tomato seed and raise a few plants—easily grown and more delicious than the Wonderberry or Sunberry. But don't forget, it's the cook behind the pie. Skill and proper seasoning—lemon, rhubarb, etc.—will do it with the Sunberry and with the ground-cherry as well. Start the plants as you would tomato-plants for main crop (here in March or April) and set in open ground about last of May or first of June, three or four feet apart each way. After you had them in your garden once, volunteer plants are liable to spring up the next year. The fruit when ripe drops to the ground and, being inclosed in a tight husk, keeps for weeks. Gather them when wanted and enjoy the pie or preserves. T. GREINER.

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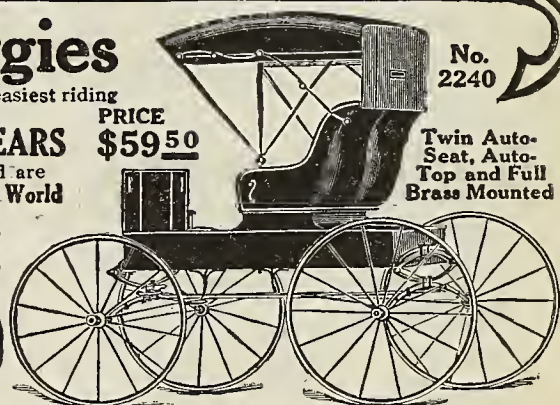
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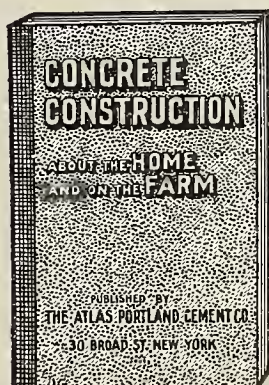
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## Live Stock and Dairy

### What the Cow Would Say



WE NEED a period of rest after we have worked for you all the year so that we may properly nourish our young and build up our energies for another year's work.

Our food should be well balanced, but we hope the time may come when you dairymen will not value a pound of protein from one source with a pound from another. Some of the protein feeds you give us are simply awful for us to eat and digest.

It seems as though you thought of nothing else except buying more protein, making more milk and forcing us to our very limits. Do you wonder we get tuberculosis or garget and that we soon play out under such care and treatment?

When you confine us to such narrow rations as many of you dairymen do, we cannot use our instinctive preference in the choice of our foods, and when you choose for us you should choose wisely. We need some kind of succulent food to assist us in digesting and assimilating the heavy grain foods we are compelled to eat.

If you would feed us a little more of the good things you grow here on the farm and not so much of those boughten



dopes, we would make you better milk and we would bring you better calves to take our places when we are sent to the shambles.

What will work out in the chemist's laboratory will not always work out in our stomachs. You seem to forget that we like succulent and palatable foods. The great records that are being made by some of our sisters are made at the expense of their vitality, and when we see veterinary surgeons visiting their homes with tuberculin, hypodermic syringes and other dope and instruments, we don't wonder that they need treatment.

We sometimes feel as though we were all out of whack. We can only lay this feeling to our owners and the way they have interfered with Nature's laws. You have bred us so that it is our very nature to put our fat into the pail, and when we get short rations we put the flesh of our own bodies into our milk. The drains on our systems are simply awful.

W. MILTON KELLY.

### Starting With Sheep

"I HAVE had no experience with sheep," says an Iowa reader, "but I have a feeling that perhaps a small flock might be of profit to me. Can a man who has no one to show him about the business learn it alone without paying for a pot of experience? . . . After our corn is laid by a lot of pigeon grass and weeds grow up in it and the land gets foul pretty fast. Could sheep be turned into this corn after harvest? What changes would I have to make in fences, sheds, etc., in putting sheep on a cattle and corn farm?"

After a man once has a start with a small flock of sheep on his farm, he will soon learn the profit derived from them, and it will not be long before he increases the number. Many men have started with a small flock without having any practical knowledge of the care and management of sheep, but by observation, and reading the articles and discussions in the best agricultural papers, they easily find the way if they are earnest students. However, it should not be overlooked that sheep never do well on low, wet, marshy land, and any one not having dry land should not make an attempt to raise them. Foot troubles are certain on wet land. "Sheep must have a dry foot" is a shepherd's maxim.

Your correspondent asks if sheep can be turned into a corn-field after the corn has been "laid by," which, I take it, means after the corn has been cut and shocked. It is a profitable practice among flock-masters to turn their lambs into their corn-fields, after the corn has been cut and shocked, though older sheep that can reach up higher on the shocks will sometimes eat a little too much corn, occasionally resulting in the loss of a few. Pigeon grass, however, sheep do not care for.

Another good plan is to sow rape in the corn-field, usually about three pounds to the acre, just before the last cultivation. When the corn is cut, a nice crop of rape is available, on which the sheep do remarkably well. Dwarf Essex rape is the kind to sow.

In regard to changes of fences, while cattle fences generally consist of all barb wires, for sheep we need woven-wire fences. These can be from two and one half to three feet high, with perhaps one or two barb wires on top to stand off the adjoining farmer's cattle and horses.

As to housing, we do not need an expensive building, as long as it is located on high ground where the water will drain away from the shed on all sides, so sheep can be kept dry underneath and dry from above during the winter season. Sheep can put up with very cold weather, but they cannot stand being cold and wet at the same time. Many sheep-owners have a common board shed inclosed on the north, west and east sides, and open on the south, giving the sheep an opportunity to go in and out as they like. The fact that we do not need expensive buildings is another point in favor of sheep husbandry.

FRANK KLEINHEINZ.

### "Keep Off the Grass"

WHEN spring is opening up and a few green blades of grass are straying through the sod, the live stock become restless and dissatisfied with what they have been eating all winter and want to roam out where they can nibble the juicy grass. Right here is where we interfere with their taste, for various reasons.

If the stock, more especially the dairy cows, are allowed free pasture, they are away and gnawing at the short grass as soon as they are turned out in the morning, leaving their feed almost entirely untouched. There is not sufficient pasturage at this season for them to subsist upon, and thus there is a marked falling-off in flesh and in milk. Notice, and you will see this very thing occur every spring, frequently with experienced dairymen.

Discretion in management is needed. Keep the cows closely confined in the dairy barn or a dry lot all night. Instead of turning them out where they can reach the pasture the next morning, keep them where they can obtain nothing but the feed you give them, until they eat a fair amount of it. Indeed, we consider it the best policy to keep stock where they can secure not even a spear of greenness till the grass reaches a growth that will enable them to live by grazing alone, when they may be gradually changed to pasturage in the usual way.

M. ALBERTUS COVERDELL.



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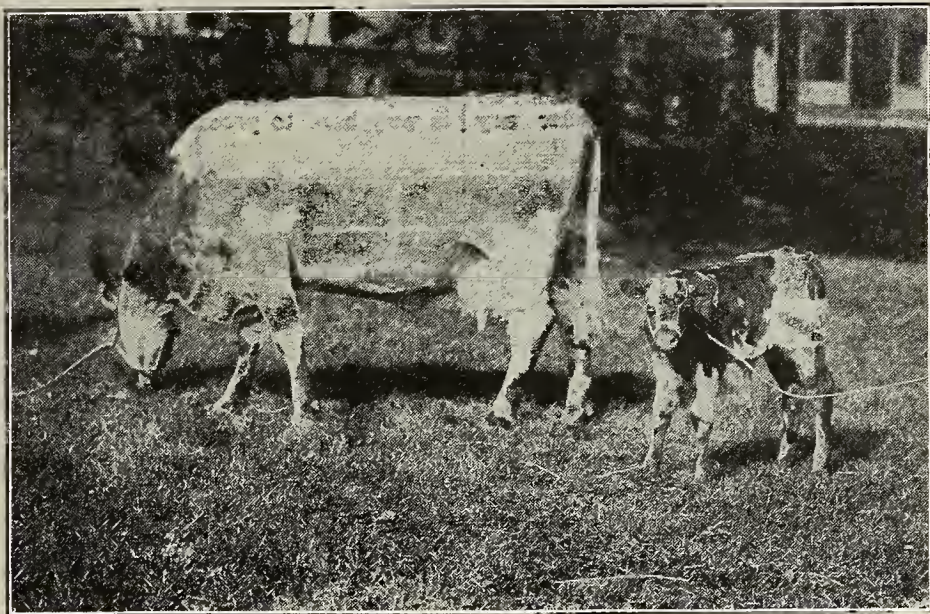


# Live Stock and Dairy

## The Cow, the Calf and the Cash

**T**WENTY-FIVE years ago land could be bought in Iowa for ten to fifteen dollars an acre, corn was often sold at fifteen cents a bushel or under, prairie hay could be had at twenty-five cents an acre on the ground and two dollars a ton in stack. Cows, such as they were, brought fifteen to twenty dollars. Cattle were still herded on the open prairie by a boy with a pony, his time, or wages, being the only expense of summering the cattle. A cow could then be kept for the chance of a calf.

Now with the price of the good farms soaring like an airship about the two-hundred-dollar-per-acre mark, corn sixty to seventy-five cents, hay ten to fifteen dollars, with other feed-stuffs at prices according, farm help scarce and wages high, cash profit from the cow and the calf is a problem, sure enough.



A Dual-Purpose Success—A Cow for Milk and a Calf for Beef

There must be, now, about fifty dollars charged to the cow for her yearly keep; then, in order to be worth the keeping, she must produce another fifty above this. How can she be made to do it?

Comparatively few farmers are dairy specialists. Most of the cows kept are supposed to be dual purpose, which dairymen are calling in ridicule "no purpose" cows. Many of them are no doubt in the latter class. But the dual-purpose cow is no dream. She will produce a very profitable amount of butter-fat and also a calf which will consume the crops on the farm at a profit; two profits in cash, which we are after, besides the keeping up of the fertility of the soil.

After considerable experience with cows, we finally did not bother with a cow which would produce less than three hundred pounds of butter per year and a calf that would grow into a duplicate of herself as a cow or into a good feeding steer that in the hands of a skillful feeder would become a market-topper.

We have sold from such cows steers as yearlings off grass their second fall, which had made a growth of two pounds per day for every day of their age, and would be classed with average two-year-olds. Our favorite breed is the Shorthorn. She may be a pure-bred, a grade or a cross with a dairy breed. We have had some Jerseys of the large type which were heavy milkers; a Shorthorn cross on these produced heifers that made very profitable cows, and males that, if they had the Shorthorn color, would sell as steers, and feed into a very good beast.

In starting out it will be found a very slow business to get together much of a herd of the good ones. By attending closing-out sales of stock they can be selected, if good cow judgment is used, though some of these so picked up will always be found wanting. Some will prove to be short milkers. A cow to be profitable must continue a good flow of milk about ten months of the year, then be such a persistent milker that she is dried up with difficulty.

How shall we handle the cow and the calf for the cash? Feed the cow on abundant pasturage in season, on properly-cured clover-hay, ensilage, corn and good corn-fodder in winter. Shelter in a barn that is warm, but arranged for thorough ventilation; always give pure water, from the bottom of the well or warmed in cold weather. The cows ought to be out for exercise every day unless in a severe storm.

Don't feed the dry cow grain enough to fatten her, for that means danger of

parturient apoplexy (milk fever). Feed the calf by hand after twelve hours old, whole milk one week, gradually getting to a skim-milk ration balanced with corn-meal, fed dry in a box, and later corn and oats—if a promising cow-calf, more oats than corn; if a steer, more corn than oats. In brief: For summer, good pasture; for winter, good hay, a dry bed and plenty of outdoor exercise.

E. G. BROCKWAY.

Mr. Brockway's experience shows that a good stockman is sure to succeed, regardless of breeding theories. We believe he would make more money if he would select a typical milking breed and go into dairying, or a typical beef breed and go into beef. But even while wasting a good deal (as we think he is) with the dual-purpose cow, he is doing far better than the farmer who has no thoughts at all on the subject, who vege-

tates along with a herd of scrubs and feeds according to what happens to be handiest.

EDITOR.

## Growing All Your Feed

**A** READER at Machias, New York, wants to plan a series of crops that will give feed for a herd of twenty dairy cows all through the year and do away with the necessity of buying grain feed.

It should not be a difficult matter to keep twenty cows on eighty acres winter and summer. It may, however, be more profitable to sell some of the crop which is raised on the land and with the proceeds, or at least a portion of the proceeds, buy other feed-stuffs, which when fed with the other crops of the farm will produce better results.

Brome-grass, about which our friend inquired particularly, will grow almost any place, but I do not think it advisable to use this in place of vetches. Unless seeded down, brome-grass is very persistent and continues to grow year after year much as timothy does, but its value as a feed for dairy cows is not much greater than timothy, which compares very unfavorably with clover, alfalfa or vetches. It should be borne in mind that all the legumes contain a great deal more protein or nitrogenous material, which is stimulating to milk-production, than brome-grass, timothy-hay or corn-stover which makes legume hay much more valuable than these others. Further than this, the legumes, by taking nitrogen from the air, make the ground richer instead of poorer, as do the non-leguminous crops.

I believe that with a little coaxing and by fertilizing and inoculating your soil it will be possible to grow alfalfa and clover, as well as the vetches, and these are good for early soiling and for hay.

It will pay under these conditions to have a silo and raise sufficient corn on well-fertilized ground to fill it. There is no winter feed that supplies the palatable succulence and milk-stimulating nutrients so well and so cheaply as does corn-silage. The use of the silo will do away with a great deal of the labor necessitated by raising grain feeds.

Were I to suggest the best way for you to farm intensively under your conditions, I would advise that you raise clover, alfalfa, vetch and cow-peas for hay, raise enough corn to fill your silo and feed silage to the cows all during the winter and in the summer, also, if they are not on grass. Root crops, if labor is plentiful and not too expensive, are another good source of succulence. Mangels are the best roots for dairy cows.

If you do not care for the silo and wish to raise soiling crops that follow each other, then it is still advantageous to have clover and alfalfa which come early in the spring followed with oats and peas which come a little later; then sweet corn followed by sorghum, after which your corn crop is ready to harvest; if you have planted some pumpkins with the corn, you will find that they are exceptionally good for holding up the milk-flow during the fall. Rape is very good, also, for fall feed if you are careful and feed it to the cows after milking so that it does not taint the milk. By all means you should have hay in the winter-time made from some of the legumes rather than timothy or brome-grass or corn-stover.

It always pays to feed grain to good cows, providing it is well balanced. When we realize that dairymen in Denmark, Holland and in other countries buy our grains, ship them across the water, sell their butter on a market which is oftentimes lower than ours and still make money, it certainly becomes evident that, providing the proper grains are used in the proper proportions, fed to good, well-bred and productive dairy cows, grain feeding is profitable.

HUGH G. VAN PELT.

## Be There at Calving-Time

**I**T DOES not pay to let the cows shift too much for themselves at any time, but as spring comes on and cows are calving, the farmer needs to double his watchfulness. A spirit of neglect may cause the loss of many dollars. The cow that runs to the straw-rick should be watched closely that other stock do not injure her or the rick fall over her when it is badly eaten about. She should be housed at night just before calving-time, if that time comes when there is the slightest risk of severe weather. She will be kept from suffering, and if the calf comes a little before time there will be no danger of its freezing to death. Have a warm box stall for the cow until the calf is strong enough to resist the cold.

The cow that is about to calve should be kept out of the hog-lot; yet I knew a farmer who used to let his hogs and cows run together the year around. He paid for it dearly. One spring he lost a valuable cow and calf that were so badly torn by the hogs that they lived only a few hours.

Never let the cow run to the brush beside a stream of water to give birth to her calf. In its first struggles the calf is liable to fall into the creek and be drowned. A little caution will save the farmer money and considerable inconvenience when his cows are calving.

W. D. NEALE.

## Fighting Water

Every month in the year your buildings—from dwelling to hen houses—have a fight to keep the water out. One drop of water working through roof or siding opens the way for more to follow. Protect your buildings by roofing and siding them with PAROID. Then that drop of water can never work through. Your buildings will be watertight and stay watertight.

PAROID is one of the well known BIRD NEPONSET PRODUCTS, tested and tried for many years in all climates. In almost all sections of the country you can see PAROID ROOFS which have been on from 8 to 12 years and are just as good as the day they were nailed down.

PAROID is bought in immense quantities by the U. S. Government and by all our leading railroads.

PAROID gives lasting service because it is made right—from the felt, which is the base, to the fixtures which hold it on.

PAROID presents a smooth, pliable surface which cold will not crack nor heat cause to run. It requires no superficial coating of sand or gravel, which suggest strength only because of thickness. In PAROID there is nothing to crumble away or work loose and no depressions where water or snow can lodge.

PROSLATE, another NEPONSET PRODUCT, is the result of a demand for a roofing, similar to PAROID, suitable for dwellings. PROSLATE is provided with an additional coating of a rich dark brown color. It is cut with a straight or tooth edge and is most effective in appearance. Looks like shingles, wears like slate.

NEPONSET Red Rope Roofing is extensively used for smaller buildings. It costs about the same as ordinary tar roofing but lasts 3 or 4 times as long.

## Look for This Mark

For a quarter of a century the "Little Girl" and the name "NEPONSET" have stood for roofing, siding and similar waterproof products, that give lasting satisfactory service.

## Neponset Waterproof Products

are made by a firm who have been in one line of business since 1817—a firm which introduced the complete ready roofing and many of the modern methods of waterproofing as applied to all classes of buildings. A firm which manufactures its product from start to finish and who makes the broadest offer that could be framed. Read it.



Sold by Dealers Everywhere

F. W. BIRD & SON, Est. 1817

Main Mills and General Offices, 8 Neponset Street, East Walpole, Mass.  
New York Chicago Washington Portland, Ore.  
Canadian Mills and Office, Hamilton, Ontario  
Winnipeg Montreal St. John



## NOT "MAIL ORDER" Cream Separators

The world's Standard De Laval Cream Separators are not sold in the "mail order" way and therefore not advertised with the big newspaper space and big "word claims" used to sell second and third grade separators in this manner.

Part of the money spent in costly advertising and catalogues to sell inferior separators in the "mail order" way is put into vastly better made machines in the case of De Laval separators, and part of it into commissions to local agents who look after the setting up of the machine and the instruction of the buyer in its proper use, as well as the prompt supplying of any needed parts for it in the years to come.

That's the difference in the method of sale between the De Laval and most other makes of cream separators, of which the De Laval buyer gets the benefit instead of the newspaper and printer.

If you don't know the nearest De Laval agent to you send for a catalogue and his address.

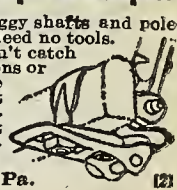
## The De Laval Separator Co.

165-167 BROADWAY NEW YORK  
42 E. MADISON ST. CHICAGO  
DRUMM & SACRAMENTO STS. SAN FRANCISCO  
178-177 WILLIAM ST. MONTREAL  
14 & 16 PRINCE ST. WINNIPEG  
1016 WESTERN AVE. SEATTLE

## Any Boy Can Attach the Spitzli Coupler

Simplest device for making buggy shafts and pole interchangeable instantly. You need no tools. Lever turns to rear; therefore can't catch in weeds or brush. No special irons or bolts. Attaches to ordinary shaft and shaft eye. Made with highest quality, oil tempered spring. Prevents rattling. Low price. Best dealers everywhere. Ask your hardware or harness dealer, or write us.

Fernald Mfg. Co., North East, Pa.





## There is a Moral Side to Good Painting



By teaching boys the importance of doing things when they ought to be done, of doing them correctly, of taking care of property and keeping everything in that condition which sailors call "ship-shape," they receive a training which will be of value throughout life.

¶ The home affords a good starting point. By keeping the house and other buildings attractive and well preserved with paint made of pure white lead ("Dutch Boy Painter" trade mark) and linseed oil, boys learn that the best is the most economical—that such paint beautifies and preserves—and never fades, chips, or cracks. It is the only kind which justifies the cost of applying it.

¶ There is still another result which comes from well-kept property. It is the pride of ownership. Boys develop a loyalty to the home in which they take pride.

¶ It is a sentiment well worth developing. It leads to thrift on the one hand and ambition to maintain a high place in the community.

¶ Our booklets on paint and painting should be read by every member of the family. Those showing color schemes and arrangement of flower beds will please the women of the household. Ask for "Dutch Boy Paint Adviser No. 47." It includes all the books and is free.

Our Pure White Lead ("Dutch Boy Painter" trade mark) is now packed in steel kegs, dark gun-metal finish, instead of oak kegs as heretofore.

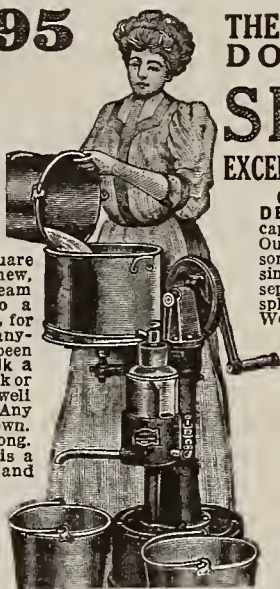
## NATIONAL LEAD COMPANY

An office in each of the following cities:

New York Boston Buffalo Cincinnati Cleveland Chicago St. Louis  
(John T. Lewis & Bros. Co., Philadelphia)  
(National Lead & Oil Company, Pittsburgh)

**\$15<sup>95</sup>**  
**AND UPWARD**

**THIS OFFER IS NO CATCH.**  
It is a solid, fair and square proposition to furnish a brand new, well made and well finished cream separator complete, subject to a long trial and fully guaranteed, for \$15.95. It is different from anything that has ever before been offered. Skims 1 quart of milk a minute, hot or cold, makes thick or thin cream and does it just as well as any higher priced machine. Any boy or girl can run it sitting down. The crank is only 5 inches long. Just think of that! The bowl is a sanitary marvel; easily cleaned and embodies all our latest improvements. Gears run in anti-friction bearings and thoroughly protected. Before you decide on a cream separator of any capacity whatever, obtain our \$15.95 proposition.



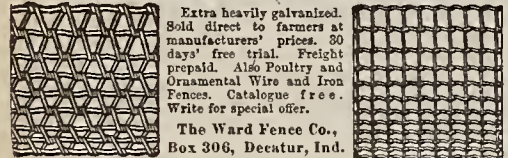
## THE LOW DOWN AMERICAN SEPARATOR

EXCELS ANY SEPARATOR IN THE WORLD

**OUR LIBERAL TRIAL ENABLES YOU TO DEMONSTRATE THIS.** While our prices for all capacities are astonishingly low, the quality is high. Our machines are up to date, well built and handsomely finished. Run easier, skim closer, have a simpler bowl with fewer parts than any other cream separator. Thousands of machines in use giving splendid satisfaction. Write for our 1910 catalog. We will send it free, postpaid. It is richly illustrated, shows the machine in detail and tells all about the American Separator. Our surprisingly liberal long time trial proposition, generous terms of purchase and the low prices quoted will astonish you. We are the oldest exclusive manufacturers of hand separators in America and the first to sell direct to the user. We cannot afford to sell an article that is not absolutely first class. You save agent's, dealer's and even catalog house's profits by dealing with us and at the same time obtain the finest and highest quality machine on the market. Our own (manufacturer's) guarantee protects you on every American Separator. We ship immediately. Western orders filled from Western points. Write us and get our great offer and handsome free catalog. ADDRESS,

AMERICAN SEPARATOR CO., BOX 1058, BAINBRIDGE, N.Y.

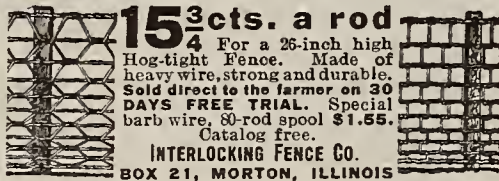
## Don't Rust Farm Fence



Extra heavily galvanized. Sold direct to farmers at manufacturers' prices. 30 days' free trial. Freight prepaid. Also Poultry and Ornamental Wire and Iron Fences. Catalogue free. Write for special offer.

The Ward Fence Co., Box 306, Decatur, Ind.

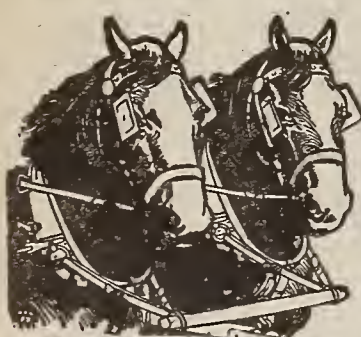
## FARM FENCE



**15<sup>3</sup>cts. a rod**  
For a 26-inch high Hog-tight Fence. Made of heavy wire, strong and durable. Sold direct to the farmer on 30 DAYS FREE TRIAL. Special barb wire, 80-rod spool \$1.55. Catalog free.

INTERLOCKING FENCE CO.  
BOX 21, MORTON, ILLINOIS

## I Want You to Try My Horse and Mule Collars—I'll Pay the Freight



HERE'S my proposition—I make the most humane, convenient, economical Horse Collar ever put on the market. It will not only positively prevent sore shoulders, galled necks, etc., but will cure old sores and galls.

My collar is the most economical collar you can buy. It will positively last a lifetime—and it costs less than other collars, hames and pads. I want you to try a pair of my

## Indestructible Hameless and Adjustable Horse Collars

for a full year—then decide. If they are not the most satisfactory collars you ever used—if they are not all I claim them to be—if they are not the best thing you ever put on your horses—if they haven't cured old sores and galls and prevented new ones—if they do not prove the most profitable investment in the collar line you ever made, send them back, and I'll refund every cent of your money.

The Indestructible Collar does away with all the galling sweat pads, expensive hames, straps, buckles, etc. Let me show you what editors, horse experts, government officials and thousands of others say about my collar. I'll send you a portfolio of valuable pointers on getting the most from your horses—curing and preventing galls and sores—saving your horses pain and saving you all kinds of trouble and expense. Write me a postal by next mail. My collars are sold direct where I have no dealers.

Fred Slocum, General Manager, JOHNSTON-SLOCUM COMPANY, 534 State Street, Caro, Michigan

## Live Stock and Dairy

### Dividends From Colts

WE HEAR about "Corn is King," the mortgage-lifting hog and a hundred and one "best-overs" for turning money out. But when it comes to money-making machines, a pair of sixteen-hundred draft mares have about everything beaten. Of course, when one reaches the point where he has more heavy mares than he can work, the cost of production becomes heavier, but until that point is reached, and as long as good three-year-olds sell at two hundred to two hundred and fifty dollars and up, there are few farm industries which will pay as large profits as colt-raising.

On a fair-sized farm we need large horses. We can get along with the little ones, but it does not pay. With modern machinery we must have plenty of motive power. A pair of heavy horses will provide it as cheaply as can be and mares make as good a team as any. So, the machinery being necessary to begin with, the pair of mares that work it pay for their keeping.

When a mare is with foal we must be fairly careful of her; but under any

far without causing a set-back in the growth of the colt; however, it can always be practised in part.

The service fee is placed at twenty dollars. It would not pay to use a cheaper animal. The first account is for a two-year-old—the total cost of a horse when worked at that age:

|                                   |         |
|-----------------------------------|---------|
| Service fee .....                 | \$20.00 |
| Supplemental feed till weaned.... | 1.00    |
| Oats for 6 mo., 4 qts. daily..... | 10.80   |
| Hay for 6 mo., 8 lbs. daily.....  | 7.20    |
| Pasture, 6 mo., \$1 per mo.....   | 6.00    |
| Oats, 6 mo., 6 qts. daily.....    | 15.50   |
| Hay, 6 mo., 10 lbs. daily.....    | 9.00    |

Cost of two-year-old.....\$69.50

For three-year-old add:

|                                 |         |
|---------------------------------|---------|
| Pasture, 6 mo., \$1 per mo..... | \$ 6.00 |
| Oats, 6 mo., 8 qts. daily.....  | 21.60   |
| Hay, 6 mo., 14 lbs. daily.....  | 12.60   |

Total cost of three-year-old...\$109.70

With oats at thirty-two cents a bushel, the cost of the three-year-old is but ninety-four dollars and twenty cents. It is very hard to produce any other animal



The Investment Ready to Bring Returns

circumstances we ought to treat our animals right. For a few days after foaling, the mare cannot work at all; but the time is so short it is hardly worth consideration. Thus, the only real expense in raising a colt consists of the service fee, the small amount of feed eaten while suckling and finally the feed from six months of age on to selling-time.

A draft colt can be worked enough as a two-year-old to pay for its feed. As a rule this work is advisable, as it breaks him and, on the other hand, does not injure him. However, in the practice of many farms it is hard to work a colt as a two-year-old, and so, in the following figures, I shall give the cost of production as a two-year-old and as a three-year-old.

The figures were prepared some time ago, so they are not in exact accordance with present market prices. However, if prices do not soar too much, it represents a fair average for three years. The cost of the oats is figured on a basis of forty-eight cents a bushel, and the hay at ten dollars a ton. According to present prices the hay is too low, while the oats are rated too high, so on an average the figures will hold good for present conditions in this Ohio region. In the figures no account has been taken of the manure, or of the saving made by sometimes substituting corn-fodder, ear-corn, straw and other cheaper feeds by means of which the cost of the colt's living may be lessened quite materially. Such substitution cannot be carried too

on the farm which will sell at from two to two and one half times its cost of production. Such animals have Standard Oil beaten when it comes to dividends.

CLYDE A. WAUGH.

### One Bad Practice

IN HIS answer to the Ohio inquirer, February 10th, under the heading "This Doesn't Pay," Prof. Van Pelt gave some dairy advice that was profitable to every man and woman that keeps cows. There is another practice he did not mention, however, which might well have been the cause of the bitter butter your correspondent inquired about—the practice of letting cows run where the horse-manure is. Try such milk on the cat if you have one—she will refuse it. One milking of this kind will taint a dozen cans of good milk. I believe more milk is ruined by this than by any other careless farm practice.

The longer cows are permitted to run to the manure-pile the more their appetites become depraved and at last they will leave good feed to rot there. I know of a lot of farmers around me who follow this bad practice, yet if we were to accuse them of being unsanitary they would be insulted.

Oftentimes an unbalanced ration is at the bottom of the habit. In their instinctive attempts to balance their feeds, cows often take to all sorts of unusual and even harmful substances. No matter how careful we are in balancing rations, this tendency is likely to be present to a small extent.

In any case, the dairyman's first move ought to be to keep the cows away from the horse-manure.

W. S. BAIR.

### Foul Floors, Bad Feet

A VIRGINIA subscriber writes concerning a cow whose feet are offensive in smell and so sore she can hardly walk. The trouble seems to be between the hoofs. From the description, it seems the trouble with the cow is one form of "foul in the foot." This is not uncommon and is caused by the animal standing in unclean places, especially in muddy, foul ground in the barn or paddock.

The affected feet should be thoroughly cleansed and then burned in between the hoofs with sulphuric acid. This can best be done by parting the hoofs and drawing through between them quickly a piece of rope or twine which has been dipped in the acid. Two or three applications of this kind once a week will bring about a permanent cure, providing the animal is put in clean, dry quarters.

H. G. V. P.



Fred Slocum  
The Horse-Collar Man

Don't bother yourself, waste money and torture your horses with old-style leather collars and hames. Just leave it to me. Send me your name and address.

—Fred Slocum.



## Big Troubles of Little Pigs

THE 1910 pig crop will no doubt have a high selling price. The brood sows have high value, a good one being worth nearly the price of a cow. They are being fed high-priced feed. Therefore, a successful pig crop means even more than usual to the hog-raiser.

A good beginning for a good pig crop is vigorous condition of parent stock. The brood sow should not be overfat and should be given plenty of exercise. Have them tame so that they may be easily handled and controlled at the critical time of farrowing. When the time comes—and the caretaker, of course, should know the date—he should be on hand day or night, unless the weather is mild and he is quite sure of a good disposition in the mother hog. Many a night has the writer been up at pig-farrowing time. If the sow is restless take away the pigs until she is ready to take full care of them.

She ought to be fed very lightly for a few days, and the pigs should take all the milk and want a little more. Over-feeding sow or pigs while suckling will cause scours; also avoid anything sour in the feed of young pigs. Even fresh buttermilk will cause the trouble.

When a bunch of pigs are at a meal, they will fight and scratch each others cheeks with their little tusks. A small pair of pliers will easily break these off and save trouble.

Pig troubles, like human troubles, are much better prevented than cured. Sunshine is a great preventive. Let there be sunlight on the pigs.

When the weather is bad and they do not get out for exercise, and they lie indoors getting nice and fat and shiny, look out for thumps. Prevent this trouble by stirring up the youngsters. Poke them out of the nest, or put them in a big box until they get hungry and hustle around—anything to get them to take exercise.

Sore mouth, the canker form, is a serious trouble at about a week old. It is infectious and causes much suffering and sure death. It can be cured as well as prevented by using a commercial dip, about double the strength used for dipping hogs. If it is detected, mix the solution in a small bucket and dip each pig daily nose foremost up to the eyes. They should have a clean dry bed. If the bedding is wet and heats, their tails are likely to become sore, crack and come off. If there are signs of this, give clean bedding and apply some healing salve—carbulated salves are good.

E. G. BROCKWAY.

## A Cow That Coughs

A KENTUCKY subscriber has a cow which he believes had an attack of "hollow tail" last fall; later she developed a cough that remains with her still.

As for the disease called "hollow tail," I do not know that any veterinarians at the present time believe such a disease is prevalent. The cough might indicate influenza, tuberculosis or pneumonia, and it would be impossible to determine exactly what the trouble may be without an examination of the cow.

As you say, however, that she now has a good appetite, drinks heartily and gives from one and one half to two gallons of milk per day, it would not seem that there was anything in particular wrong with her except possibly the after effects of a serious cold which probably was near bovine pneumonia.

It might be well to consult a veterinarian and, in case you are using the milk or selling it for human consumption, have her tested for tuberculosis. If she reacts, the best thing would be to dispose of her. The risks of having a tubercular animal among your stock and using the milk from her are not worth running.

If she does not have tuberculosis, likely your veterinarian will be able to prescribe for her. He will probably have you give her a pound of Epsom salts dissolved in water and given as a drench to start with. It is always advisable to follow this up with one or two quarts of raw linseed-oil given every other day at the rate of three fourths of a quart at a dose every forty-eight hours while it lasts.

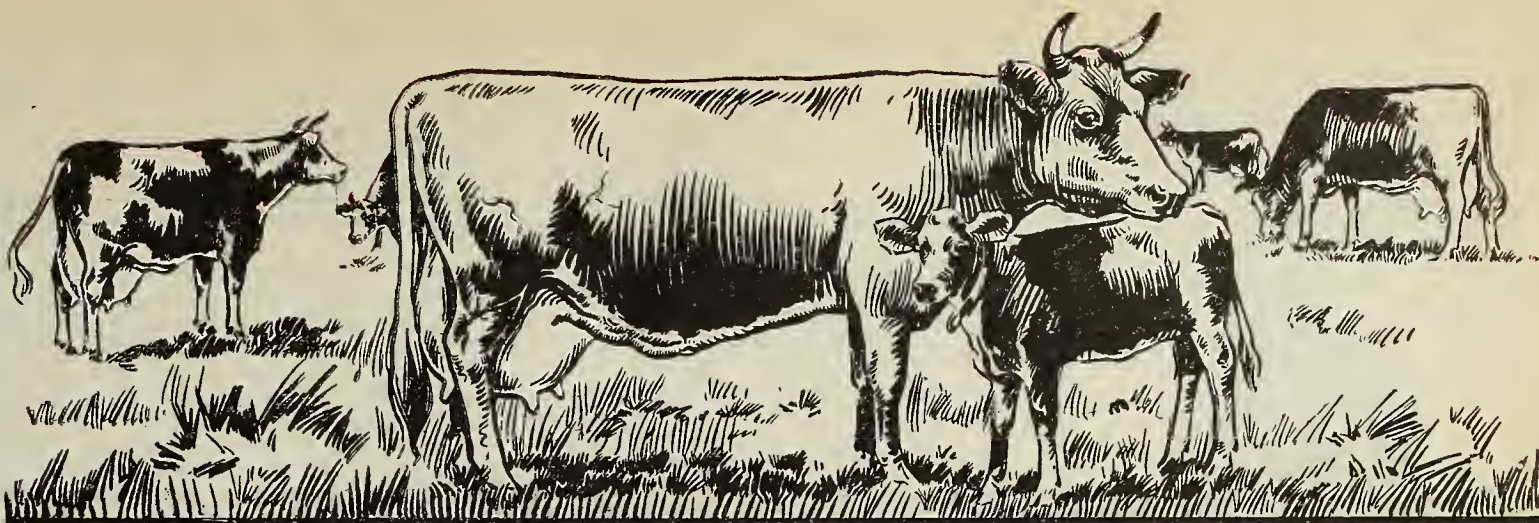
HUGH G. VAN PELT.

Don't use milk from a cow which is taking medicine of any kind. It often goes into the milk.

Use boiling water in the dairy—boiling; do you hear?—and plenty of it. Of course, steam is better still, if you have it.

Cheap tinware has bad seams to clean. Use the best in the dairy. Pressed tinware is best. Old, battered, rusty utensils should never be used, no matter how thoroughly washed and scoured.

Don't kick up a dust in the dairy barn before milking. Dust is full of bacteria. A cobweb is less out of place in your parlor than in your dairy barn. Cobwebs gather and scatter dust. Have your ceilings dust-proof and don't feed straw, hay or fodder before milking.



## How the Development of an Idea Grew to Cover the Entire Country

The story of *KineTonik*—how it was prepared—how, from a mere Idea aimed to benefit a few Farmers, living in three Counties, grew to be a financial benefit to stock owners in 28 States in less than 48 months—an interesting story of deserving success. If you own horses, cows, sheep or hogs—5, 8, 19, 50, or 100 head—it will pay you to read every word now.

### In The Beginning

Draw a circle of 50 miles around it—the little town of Wellsboro in the center.

Picture a country, rich in profit-producing farms and herds—watched over by shrewd, well-informed, prosperous farmers. Then you will have a clear idea of the community in which *KineTonik* was first used, tested, endorsed—and sold.

Tired and dissatisfied with paying manufacturers for prepared stock "Food" Tonics, not always fresh, seldom reliable, sometimes adulterated; Out of patience with old-fashioned methods of buying such preparations in bulk; Exasperated at having them harden, sour, become rancid or wormy before half used—disgusted at being obliged to pay excessive charges for undependable freight deliveries, in addition to already high prices—

Some time ago three men in Wellsboro, Tioga County, Pennsylvania, determined to feed their cattle only such fresh, reliable "conditioners" in the form of a Tonic, as were known to possess merit, purity and beneficial qualities.

To these three dairymen the *KineTonik* of to-day owes its origin and success.

**Second**—To obtain an accurate record of results; to learn whether it could be recommended to farmers in other climates; to secure the unbiased opinions of men competent to judge the merits of the compound; and

**Third**—To determine whether a profitable, country-wide distribution could be satisfactorily attempted.

That the tremendous expense of this plan was justified is now borne out by the unqualified success of *KineTonik*.

### Benefits Now Shared By All

To-day the experimental stages are passed. The Rural Home Wagons have been withdrawn.

The periodical visits of highly paid, experienced demonstrators have ceased. *KineTonik* is now sold in every farming community of importance in 28 States—not because it is cheaper—not alone for what it is—but for what it will actually do.

Thrifty farmers everywhere using *KineTonik* as the basis of their own stock tonic mixtures find this compound of pure herbs and drugs to be all that I claim—and that its use is an investment of many returns.

Compare it with any patent Stock Tonic Preparation you are now using, under any or all conditions. You will find *KineTonik* to be a positive money-saver in every sense of the word. And when the virtue of a stock tonic depends solely upon the medication—not the filler or food—you can easily see that the *idea* of *KineTonik* is right—that the saving in price alone is great enough to make its use in feeding your stock a regular thing.

### You Pay For Medication Only

Instead of paying from 10c to 15c the pound for such Stock Foods as are commonly sold in bulk—simply use *KineTonik* the medication itself, and mix your stock food as you want and need it—not as any one else, who knows nothing about the condition of your stock, may dictate.

*KineTonik* is sold in feed, drug and general stores, in packages—not in pails or buckets. Its sale is never forced with horse whips, jack knives, pictures or other "presents" as premiums. Every 5-pound, moisture-proof package contains the essential ingredients of a perfect, wholly reliable tonic—all of which are amply protected against climatic changes and guaranteed to keep any length of time—without moulding, caking, or disintegrating in any way.

Simply add 15 pounds of any ground feed, 2 pounds of common salt to the contents of one package and you will have an honest and reliable stock tonic and regulator at about one-third the price usually demanded for stock foods of the old-fashioned sort.

### Pure Drugs:

Compounded scientifically from absolutely pure, full strength stock, designed to aid digestion, assist assimilation and quicken elimination—to promote health, flesh, strength and milk.

# KineTonik

### A Success in Three Counties

The idea of making their own Stock Tonic mixtures in quantities suited to the needs of their own cattle, appealed to farmers adjacent to Wellsboro as it now will to you. The *idea* had merit.

Through its economical advantages—their ability to mix it themselves, as needed—their absolute knowledge of the character, quality and purity of ingredients used—the lasting benefits of the *KineTonik* formula upon their stock—the *idea* continued to spread.

Farmers in neighboring townships, attracted by the thrift, prime condition and quality of milk from Tioga County dairy herds, after careful tests, systematic feeding and analytic comparisons—soon discovered the *cause*.

The formula used by these men, the ingredients of which until some years ago were sold in small quantities, in time became the property of the Rural Home Chemical Co., of Wellsboro, and under the trade name of Rural Home Stock Food Medication, was sold with increasing and deserved success in Potter and Bradford Counties in Pennsylvania, and Steuben County in New York.

### Distribution In Three States

To introduce and make general the use of this same compound the wagons of the Rural Home Chemical Company became familiar sights in the various farming districts of Pennsylvania, New York and Ohio. The *idea* became a tangible, marketable reality.

In charge of experienced stock men the work of making known the permanent benefits of *KineTonik* was begun in this way:

**First**—To meet personally and learn from every successful farmer in a given territory his experiences preparing and feeding it to his stock under all conditions.

They find it economical and convenient. You will find the absolute, scientific certainty with which *KineTonik*, in prescribed quantities, better the health and condition of your horses, cows, sheep or hogs, a permanent, increasingly profitable investment whether you own 9, 29 or 100 head.

### Ingredients Well-Known

Besides—when your cattle fodder is mixed with *KineTonik* you know absolutely what you are feeding, which at best cannot be said of any other so-called "Stock Tonic" on the market. Every ounce of our compound is guaranteed under the Pure Food and Drug Law to be pure, fresh and wholly beneficial. No mystery—no intermixture of foreign elements—no adulterations—no filler to increase the price or cost of shipping is tolerated. *KineTonik* is sold and used for just what it is and the more generally its ingredients are known, the greater will be the demand, for there is no secret of the fact that they are only such as these with which you, yourself, are familiar:

Boneset, Gentian, Nux Vomica, Golden Seal, Copperas, Sulphur, Soda, Capsicum, Ginger, Sassafras, Calamus (Sweetflag), Stimulants and Carminatives, Juniper Berries, Salt Petre, Licorice, Epsom Salts, Aloes, Fenugreek, a flavoring

Remember the Name and Package

### A Marvelous Money-Saver

And because the *idea* governing the preparation and sale of *KineTonik* in every farming center in America is right—honest—liberal and fair—because its wonderful success has been due to its certain efficiency in improving the health of cows, horses, sheep and hogs—

Because of its marvelous convenience, reliability, keeping qualities—I now recommend it to cattle owners in every farming center in the country—to you.

Judge it by any test you please. Try it out.

H. F. Bush, General Manager  
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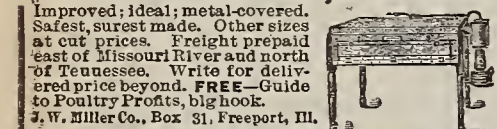
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## Poultry-Raising

### Mothering Incubator Chicks

RAISING incubator chicks is a much more difficult proposition than raising those that have a natural mother to superintend their up-bringing. The attendant must not only feed properly, but provide hover facilities as well. From watching the hen's way (Nature's way) I have learned some valuable lessons to apply with my motherless chicks.

Watch a hen with a brood of healthy chicks. You will see that she is either busy scratching and making her chicks scratch for a living, or she is hovering the babies to keep them warm while they are resting. That is the theory I work on in raising the incubator chicks and I have often raised ninety per cent of those hatched.

My brooder-house is built in three sections on the south side of the dwelling-house, and sheltered by it on the north and east. The first part, or hover section, consists of a large dry-goods box lined inside with newspaper and having a hinged, sloping roof covered with roofing-paper. In the box are two fireless brooders. The middle part is the storm section and is built exactly like a hotbed, the roof consisting of a hinged hotbed-sash, which slants sharply toward the south, allowing all the sunshine possible, and which is made to fit water-tight. The walls are solid all around. The ground is covered with fine chaff (I use alfalfa-meal) and plenty of sand. This section is absolutely dry. The third section has a solid base like the middle section and built to slope to the south, but is covered with a hinged roof of one-inch wire netting; the ground is spaded often, and in good warm weather the chicks are fed there.

In such a house the chicks are safe from cats, dogs, rats or hawks. In bad weather the passage into the open-air section is kept closed so they are cozy and dry in the hotbed section, the heat from their bodies making the temperature about right. This brooder-house is ready before the hatch comes off; it is thoroughly cleaned, fresh litter and sand strewn on the ground, and the feed-hoppers and drinking-fountains washed and scalded.

In working for strong healthy chicks I began with the eggs, selecting the most uniform from my best stock. Each egg is marked with the date of laying and whether it is a hen or pullet egg. This tells me two things—which pens produce the most fertile eggs and how long it is safe to keep them and still be sure of a hatch.

By following the manufacturer's directions closely, one can have fair success with any good incubator. Of course, I have my preference, using a two-hundred-and-forty capacity hot-air machine; it is connected with gas instead of a lamp, which cuts the labor in two and gives a more even heat.

The most important factor in running an incubator is the memory. Does a hen ever forget that she is setting? Just try to break one up and you will find that setting is her one purpose in life. We must be just as vigilant. My incubator is never entirely out of my mind until the hatch is off and the gas turned out—not that I sit up with it, but I turn the eggs often, air them properly, furnish moisture and watch the thermometer closely. The last thing at night and the first thing in the morning my attention is given to the incubator.

### The Babies

The baby chicks are left in the nursery of the incubator until they are thoroughly dry. If it is a mild, sunny day they are taken at once to the brooder-house, being careful not to let them get chilled on the way; if the weather is bad, they are kept in the kitchen, the fireless brooder being placed in a box with room enough to feed them in deep sand and alfalfa-meal. The pip is taken off the bill and each one given a drink of water when placed in the box.

They are watched closely all day, but not fed. As soon as they show signs of huddling together, they are placed in the brooder to rest and sleep perhaps for an hour, then released for another run. This takes time and attention, but the hen gives her entire time to the raising of her brood and we must imitate her.

If the chicks are hatched Monday morning, Wednesday morning they get their first feed—dry ground bread-crumbs. The bread is scattered in the litter three or four times a day and they are taught to scratch for it. Just as soon as they stop eating and begin to huddle, they are put to bed for an hour or two,

then released again. I keep them sleeping most of the time the first week. They are babies, you know, and must be treated as such, and you have brought these downy little creatures into the world motherless and must supply her place as nearly as possible.

After the third day they are fed a reliable chick feed in which is mixed the grit. They must have grit as soon as grain is fed. Clean water is kept before them all the time in fountains they cannot get into, for many a chick owes its death to getting wet in the water-pan and then chilling before it gets dry. After ten days ground beef-scrap and green food are scattered in the litter, and how they scramble for it, getting fine exercise. Dry bran is kept before them, also, and it is surprising how much they will consume.

The method of keeping the chicks hovered when not scratching and scratching when not hovered has proven wonderfully successful with me, other conditions being favorable.

The chicks are not released from the brooder-house until they are three months old and able to go to roost.

MRS. J. B. ROGERSON.

### Less Filth, Less Disease

IT is a woefully common thing to see badly-neglected hen-yards. I think one reason why some beginners have such good success at poultry-raising the first two or three seasons is because they have pure, clean and fresh ground to work on. Where everything goes finely from the start one is more apt to be neglectful as time goes on. Permanent poultry-yards positively must be kept clear of rubbish and filth, for where hens are kept year after year the soil sooner or later becomes contaminated with disease germs, and losses by decrease in vitality of the flock and through sickness are the result.

Properly, houses should be so arranged as to permit of double yards, or two yards for each pen. Then one yard can be plowed or spaded up and a crop raised on it while the other is in use. Not only in the permanent runs, but around the farm-building and back dooryards, where some flocks spend much time, the ground should be broken up and a crop or two raised on it. This will cleanse the soil, and on farms where much loss has been experienced from gapes, bowel troubles, and so on, it will often be the turning-point in the results. We have all noticed the strong and sour odor from the soil of old and ill-kept runs. While this offensive smell does not necessarily mean disease and death to the birds, it is well to take it as a warning. Now is the time to correct these evils. When the snow disappears, get busy, dig down and clean up.

V. M. COUCH.

### Guinea Calls

A SUBSCRIBER asks what call can be used for guineas. The young guineas could likely be taught any call that might be adopted, but as our guineas are hatched under chicken-hens they learn the chicken cluck readily and follow their foster mother as readily as they would the guinea-hen. Further, they learn to come at the common "chick-chick" call of the one who attends to feeding all the poultry.

I have seen it recommended to hatch a few young chicks with the guineas to teach them to follow the hen. I have not found this necessary; the young guineas stick to the hen that hatched them until they are grown.

A. J. LEGG.

Give the air a chance to circulate under the floors of your houses, or they will soon rot out.

It takes grit to clean the hen-house regularly, often and thoroughly. Few men are up to that, and so few men do as well as they might with poultry.

Hens are not very apt to take cold if they are kept in a well-ventilated house, provided the wind does not blow right on them. They are a good deal like a person about that.

It does cost more to get large eggs. If you have hens that lay that kind of eggs, you must hunt up somebody who is willing to pay you more for them, or you will be playing a losing game.

Do you feel as if you must set right out with three or four hundred hens, now that eggs have been bringing such a good price? Then listen. One of the best poultrymen I know, who had been making a success with a fair-sized flock, last year doubled his number and went down with a crash. Go slow.

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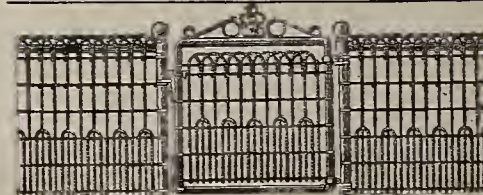
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# Practical Poultry-Raising

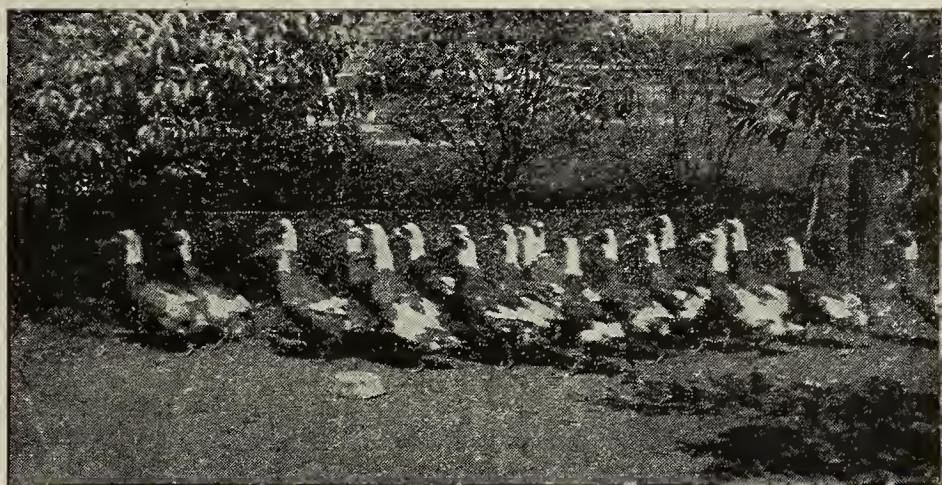
## The Indian Runner Duck

**B**REEDS of poultry seem especially subject to what are known as "booms." Every little while a wave of interest in some new breed, or variety, sweeps over the country, and dealers are hard pressed to supply the demand for stock and eggs. These booms—so called—are slower in reaching farmers than town poultry folk, though they reach the better farms now much earlier than used to be the case.

The Indian Runner Duck is an exception, I think, in that the interest is spreading faster among the farms than elsewhere. This might, possibly, be due in part to the fact that ducks, as a rule, claim range and water, and are, therefore, better fitted to farm than to town

market. But they stated that any duck, well fattened and of good flavor, would sell well. I was particular to state the weight of the Runners, so that they spoke with knowledge of the facts. Many of the letters coming to me have voiced a fear that the carcass would be too small for the market.

It is very wise to get all the facts possible before entering on a new enterprise, in order not to make mistakes that could have been avoided. The Indian Runner is, first of all, an egg-layer. But the bird kept for a layer is bound, in the end, to make a supply of market stuff, unless it lives to be too old for this purpose. It is said that the Runners will do as well the second year as the first, and almost as well the third year. How far this tendency can be carried we do not as yet



They Step Lively, Grow Fast and Lay Plenty

conditions. Be that as it may, I have been astonished to see the ardor with which farmers, and especially farmers' wives, are taking up this duck.

Other countries have been before us in the interest in Indian Runners. England, Australia, Ireland—all have sent out reports of the very great value of these water-fowls. The Australian competitions among breeds of hens have occasioned considerable interest in this country, and in the latest competition the Silver Wyandottes were reported as in the lead of the one-year trials, for the first six months of the year. But the interest seems likely to center in the ducks. A six-month record by no means tells all the story; it may be that the lot in the lead at the end of the first six months will rank quite differently at the end of the year. We need to consider, too, that the seasons reverse ours, which sometimes interferes with our judgment on short-term reports. But, at any rate, the Silver Wyandotte hens have a six-month record of 120-plus; the Indian Runner ducks of 125-plus, while the record for eleven pens out of twenty-five will bring all these above the two-hundred-egg mark for the year if the production keeps up. Much higher records than this have been reported, but these are the best certified records we have of exceptional laying of large numbers of birds for long periods, when not in the hands of their owners.

The Indian Runners weigh just about half as much as the Pekins, and it would be a good guess that they would eat something like half as much. When they want food, they want it badly and are not at all backward about saying so. But they are reasonable eaters. One enthusiast has said that the food of one Pekin would keep four Runners, but I imagine this reporter stands alone. The last poultry paper I picked up had two articles on Runners, with another on "Ducks," which referred to the Runners as laying both in winter and in summer and as being snail eaters.

It has seemed to me that there would be a distinctive place for the Runners in filling the blank left by the failure of many of our game birds. The government is doing so much for the protection and re-introduction of the game birds that it is impossible to say how these things will work out, eventually. But there should at least be a part of the year during which this duck will supply the demand for meat with a gamey flavor.

I have been in greater or less touch, for years, with a reliable commission firm in New York City dealing in farm products. This firm had told me that there is always a good demand for guinea broilers at certain seasons of the year. I wrote them concerning the Indian Runner as a possible means of supply to the demand for birds with the game flavor. They replied that they did not recognize this duck as having been in the

know. But we do know that they lay an egg just one half larger than the standard hen's egg, and, as they are offered at an advance of a few cents above the going price of hens' eggs, this ought to insure a market. Commission men say that the reason duck-eggs are not quoted in later summer months is that they are not available. If the Indian Runners keep on their victorious way, this will soon cease to be true, since they keep up a regular supply till the molt comes on, usually in August. By this time the younger flocks take up the work.

The failing winter egg market, too, is likely to be noticeably strengthened by the advent of the Runner. This duck is a good winter layer under the right conditions; the eggs are as sweet as those of any breed of fowls, and they are of superior quality for many purposes of cookery, as well as one half larger than the eggs of most hens. These being the facts, it is not difficult, nor is it risky, to predict that the Indian Runner will take a well-deserved, economic place in the country at large among the friendly helpers of our country homes.

The photograph shows a good average bunch of ducklings, nearly mature, at eleven weeks old, though this particular lot carries half the blood of imported English stock. They mature young, always, and we have had them lay at twenty weeks. C. S. VALENTINE.

## The Fine Art of Feeding

**A**N INDIANA friend repeats again the oft-repeated query: "What shall we feed to our hens to make them do their best—how often shall we feed them, and how much?" This problem of feeding is one of the standing mysteries of poultry-raising, particularly to those who have had little experience. It is almost impossible to lay down hard and fast rules, any more than it would be in laying out a bill of fare for a lot of people; still, some general rules may well be observed.

The best poultrymen avoid overfeeding. Some say, "Keep feed before them all the time; they will not eat more than they want." Others are so careful not to feed too heavily that they go out after their hens have gone on the roost at night and feel of their crops. If the crop is distended and hard, they conclude the birds have had too much. If they are in a fairly comfortable state, they are satisfied.

For myself, I believe that enough is as good as a feast. If the hens clean up all you give them and have a good appetite, so that they would go on scratching and digging for a bit more, you may be pretty sure they are not suffering for food.

Careful calculations show that, on the average, a hen will eat and digest for the morning meal, three ounces of mash; for dinner, two ounces of grain; for sup-

per, four ounces of dry grain. This would make about seventy-five ounces, or a little less than five pounds, of mash in the morning for twenty-five hens, fifty ounces of grain for dinner and one hundred ounces for supper. Of course, much depends on the size of the fowl and other conditions; but by watching the birds we may soon determine whether this be too much or not enough. In cold weather more would be needed than in summer. The quality of the feed should also be varied according to the season, still further taking into account the facts relating to confinement or free run.

Coming now to the question of what to feed, let us say that from late fall to early spring the following menus would probably prove fairly acceptable:

Morning, mash of corn-meal, wheat-bran and beef-scrap; noon, wheat, barley, oats or millet; supper, cracked corn or corn on the ear. Or this may be turned right around, feeding the grain in the morning, in which case it may be warned to very good advantage, the wheat, etc., at noon and the warm mash in the evening. Green feed, grit and pure water ought to be on hand all the time.

A word as to making the mash. Take two quarts of corn-meal, three quarts of wheat-bran and about a pint of beef-scraps in a pail or other good-sized vessel. Pour boiling-hot water over the mass, stirring thoroughly until the whole is moist and crumbly, but not so wet as to be soft and sticky. Then get out to the house and feed as soon as you can. It is understood, of course, that these figures are only relative. The quantity will vary according to the size of the flock, using the number of ounces referred to above for each fowl.

It is just as good for a hen to work for a living as it is for a man. For that reason grain should be fed among litter, kept deep and clean all the while.

Vegetables ought to be suspended, in the case of cabbage, from the ceiling a foot or so from the floor so that the hen has to put a good deal of strength into reaching up to get it. One sign of health in a flock is the vigor with which the birds come to their daily exercise. Keep them busy, feed them well and then gather in the eggs. E. L. VINCENT.

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**THE BEST ROOFING?**

Authentic figures of an authority throw new light on the problem.

One of the important journals devoted to the interests of the building trades, *Cement and Slate*, has gone to great pains to settle, in an authoritative way, the important question as to what is, beyond further doubt, the best all round roofing material.

It is unbelievable that this necessary point has not been decided upon before, but such is the case. Until the publisher of *Cement and Slate* made his careful analysis of the merits and demerits of the different roofing materials, no final, no conclusive information on the subject existed.

Of course builders and some owners knew that felt roofs were the "cheapest" as to first cost and they guessed they were cheapest to maintain, but it was only a guess. The inspired figures of felt roofing manufacturers lay at the bottom of this guessing. Common sense hinted that no roofing that had to be protected or water-proofed could be equal to a self-sufficient material that needed no sort of help; but it hinted merely, and the apparent cheapness of felt, over-rode all other considerations.

In fact, owners, architects, and even practical builders, have long been victims of a curious error regarding the "cheapest" roofing. As *Cement and Slate* says: "There is a vast mass of false and misleading information prevalent on this subject even in the building trade. In order to show at a glance what the actual figures are we present the idea in tabulated form." (The figures are for a square—100 feet.)

| Material        | First Cost       | Av. Life | Cost Yearly |
|-----------------|------------------|----------|-------------|
| Corrugated Iron | \$3.00 to \$5.00 | 10 years | 30c to 50c  |
| Tin             | 8.00             | 20 years | 40c         |
| Shingles        | 5.50 to 6.00     | 10 years | 45c to 50c  |
| Tin Shingles    | 6.70             | 10 years | 67c         |
| Copper          | 30.00            | 30 years | \$1.00      |

Based upon the current average cost, *Slate* will last for 75 years at a cost of half a cent per square per year.

It will be readily seen from this that a slate roof is not only the most durable, but when the original life is taken into consideration, it is practically 30 to 50 times cheaper than iron, nearly 40 times cheaper than tin, almost half a hundred times cheaper than shingles, and practically a hundred times cheaper than copper.

We know the general impression is that slate is not a cheap roofing material. It certainly is not an expensive one. This misapprehension is an injustice this superior material has labored under long enough. At the outset it is not the cheapest material possible to buy, but eventually, and this soon, it is not only the cheapest but beyond comparison, the best. Who, having foresight, would achieve a first cost saving only to fritter away that saving later in unavoidable and unending upkeep expenses? It is not to be thought of without a shudder.

A well laid roof of Sea Green or Purple Slates (the most durable of all) makes the most practical of all coverings, for though it costs a little more in the beginning, it immediately begins to save its owner both money and anxiety. It wears better than iron—seven times better; it has appearance; an air of stability and respectability; it is waterproof; and is emphatically the only material to use if drinking water is collected off the roof, for it alone of all roofings will not rot, rust, crack, warp, or absorb the poisonous gases of the atmosphere.

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Style Roof.....  
Approximate Size.....

# Farm Notes

**Wheat Following a Legume**

INSTEAD of wheat following wheat or wheat following corn or oats, it is best to have wheat follow a legume. Wheat thrives following either a clover sod turned under or a crop of cow-peas. Often it can be made profitable to run a bunch of hogs in on the peas early and let them eat up the peas and what they will of the vines. Before they pack the ground too hard, take them off and run a good sharp-toothed harrow over the ground, after which the drill will follow and seed the wheat with success. Hogs on such pasture always make good gains and are in much better shape for fall markets than they are otherwise, while at the same time the labor of harvesting the crop is reduced to the minimum. The hogs will gain enough to equal what the pea crop would sell for and leave quite a little droppings on the land for the immediate use of the wheat crop that is seeded after them.

Cow-peas help the wheat in other ways than by the nitrogen they leave. The roots of the pea go down deep and put the soil in an ideal condition for the liberation of the plant-food that is otherwise unavailable. Wheat likes a firm, mellow seed-bed, and the peas leave the land in just about the condition for its best development. I never like to plow the land fresh just before seeding the wheat. Neither do I like to work the land and let it remain bare from two weeks to three months before seeding, as the hot sun to the bare land is, in my judgment, hurtful.

Clover is all right if it is turned under early enough for the land to settle down; still, I have not had as good success sowing thus after clover, as after the cow-peas, either where they were hogged off or the vines mowed. I prefer either hogging the peas off or mowing them, as the vines will shred away in the wind if they are hand-picked and the vines left standing and the wheat drilled in among them, and the humus and fertility value of the vines is almost lost. But in case of hogging them off, what the hogs leave they will tramp into the soil to a great extent and thus very little is wasted.

Wheat is a heavy feeder of nitrogen, and my experience is that it should always follow some legume that will give this element.

R. B. RUSHING.

**Muck as Manure**

G. A. E., Massachusetts, writes: "I would like to ask if there is a way to make a fertilizer from peat or meadow muck, and what chemicals to use, for use on what kind of land?" T. W. J., Ohio, in a letter on the same mail, writes: "At a very dry time, in 1908, fire broke out in a woods, burned over a black swampy muck which was covered with leaves, etc., to a depth of three to five inches. This soil remained there one year, then I hauled out two or three tons and have it in the dry. What value would this have as a fertilizer for corn, drilled two or three hundred pounds per acre or mixed with two-eight-two goods?"

These two make a total of ten letters I have received in the last month containing some inquiry regarding peat or muck. I wonder if the fact that some fertilizer manufacturers are buying large quantities of them has not given many people an exaggerated idea of the value of these materials. The manufacturer buys them primarily to use as "dryers"—that is, to dry the fertilizer if the acid phosphate and other substances are too moist to be in good condition to drill. At the same time the muck gives a darker color to the fertilizer and on many markets a dark fertilizer sells better.

So-called muck soils are very variable in composition. They are always formed in low lands which are, or were, marshy, and the point which distinguishes them from all other soils is their high percentage of organic matter, due to the fact that they consist largely of the remains of marsh plants only partially decayed. They contain all the way from twenty-five per cent to over eighty per cent of organic matter, the mineral constituents, of course, varying in inverse ratio to the organic matter. This organic matter carries from one per cent to three per cent of nitrogen in a very unavailable form. The phosphoric acid and potash in these soils are very low, amounting only to a small fraction of a per cent.

From this it will be seen that the principal value of peat or muck is in the organic matter which it contains. It will, therefore, be of doubtful value to add only a few hundred pounds to the acre.

If used at all, it should be added at the rate of several tons to the acre. If used

in this way, muck is of undoubted value in improving the physical condition of soils which are lacking in organic matter. One of the best uses to make of dried peat or muck is as an absorbent in the stable. It prevents loss from the manure and causes the nitrogen in the muck itself to nitrify and become available more rapidly.

It is doubtful if the muck hauled out by T. W. J. was changed in value by the burning. If it had been removed immediately there might have been some extra value in the surface few inches, due to the ash remaining from the burned part, but after standing a full year the soluble materials would have been washed out. It would not pay to mix it with commercial fertilizers, as mentioned above, but if it could be applied at the rate of six to eight tons to the acre, say with a manure-spreader, it would undoubtedly give good results.

ALFRED VIVIAN.

**Useful Sunflowers**

A GREAT many people do not know the real value of the sunflower. Last summer we raised four rows, each eighty feet long, from which we harvested three bushels of seed. We cleaned the seed from the heads with curry-combs and fed it to our chickens with wheat. They relished it and prospered on it.

A handful in the horse's feed will make its coat sleek and glossy. A handful for the cow will keep her digestive apparatus in good order. It is good for the hog, taking the place of oil-meal.

A seed in each lima-bean hill will save cutting poles. We planted corn-field beans in our rows and raised quite a crop, but you must not expect a full yield when planted in the rows, as it is too shady.

There are three varieties of sunflower, giving black, striped and white seed, all of equal value.

Try a few this summer. The hens will be glad.

C. A. THOMPSON.

**The Why of Drilling**

IN SOWING grain broadcast, the seeds are unevenly distributed, while with the grain-drill the uniformity in the planting prevents crowding later and the exhaustion of the soil fertility in spots. The drilled grain thus will be more liable to develop both a high-grade product and a heavier yield.

Where grain is sown by hand or the broadcast seeder, many of the seeds will be so lightly covered that sufficient moisture for germination will be lacking. Some will even be left on the surface to be picked up by the birds. The grain-drill buries all seeds uniformly at a controllable depth.

Again, with broadcast sowing, part of the seeds are almost sure to get the start of the others and tend to smother the later plants down. Then, the field does not ripen uniformly, and the plants first ripened are very liable to shatter out, causing considerable loss of the earliest and best grain in the field; while placing every seed at the same depth insures even germination and uniformity in the heading-out of the crop over the whole field.

Still another advantage derived from the grain-drill is the placing of the seeds so that the plant will get a start at forming a deep and vigorous root system. The plants will thus not only produce a heavier yield, but will be much more liable to resist strong winds, hail or rain and stand up straight at harvest-time, which prevents the loss frequently occasioned by down grain and insures one of a straight product to handle in shocking, stacking and threshing.

M. ALBERTUS COVERDELL.

The total acreage of phosphate lands in Idaho, Utah and Wyoming which have now been reserved for entry by the Secretary of the Interior aggregate 4,541,000.



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## Farm Notes

### Agee Talks Potatoes

ON A certain afternoon of the last Farmers' Week at Pennsylvania State College, the program promised a lecture on the growing of potatoes by Prof. Alva Agee of the college faculty. Professor Agee is well known, and late comers were unable to get within hearing distance. His own farm experience, illumined with the light of scientific training, makes him an authority on potatoes, and his style of speaking is beyond imitation, clear, plain, full of facts, yet without quaint and wonderfully attractive. His lecture was worthy of a larger audience than a single hallful. The only way to get the full benefit of one of his talks is to hear him, but at least the substance of what he said is conveyed by this repetition.

#### Humus and How to Get It

The potato requires a soil that is loose and friable, to allow the tuber free growth and that at the same time re-

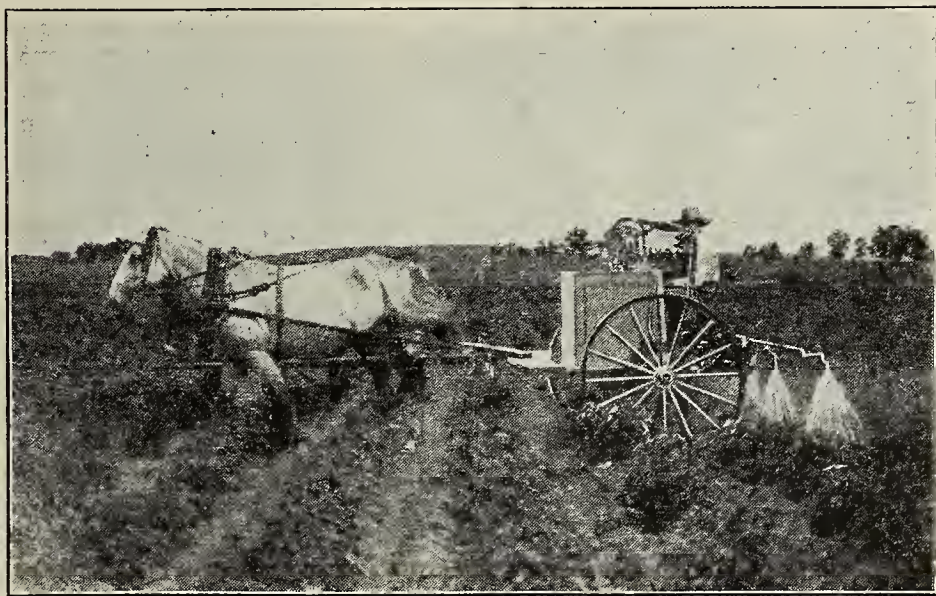
cannot push through a heavy layer of soil and be strong. Hence let the covering be light and work the soil in afterward.

Moisture is essential to a good crop. Cultivate as soon as possible after every rain and keep it up as long as you can get through the rows. Some use sweeps to lift the vines as the cultivator goes through.

#### Pests

If a field is full of scab, it is best to hunt another. Lime must be used cautiously, as a sweet soil is favorable to the fungus. Seed treatment is of great value in keeping the land free of this pest. Formalin is effective and perfectly safe if directions given in the spray calendar, that may be obtained from the experiment station in almost every state, are followed. The treatment is essentially a two-hour immersion in a solution of one pound of formalin to thirty gallons of water.

A dead vine makes no potato. The



It is a Choice Between Spraying and Blight

tains moisture. The potato will not wait for rain as will corn. The solution of the problem is organic matter—humus. It may be derived from heavy sod, manure or both.

A heavy clover-sod plowed down is best. Or manure grass heavily. Grow a crop of corn. Then plant potatoes. This gives a rich loose soil, but the sod must be well fed. In turning heavy sod, weight the disk harrow, hitch four horses to it and chop the sod both ways before plowing. This makes fitting easy—usually a troublesome process with potatoes. Horses tramp heavily on plowed ground, with the result that the potato cannot be comfortable.

Plow deep—nine inches if the soil is full of organic matter, otherwise not so deep. A breaking-plow with a short straight moldboard is good. The sod cannot get to the bottom of the furrow to cut off moisture from the roots.

#### Fertilizing and Cultivating

Phosphoric acid is usually needed more than any other element. Potatoes are regarded as a potash crop. A Long Island grower set out to prove this by experiment, but in the end he recommended heavy applications of phosphoric acid. Goods containing nitrogen, three per cent; phosphoric acid, ten per cent, and potash, six per cent, are better than three-six-ten goods. Too much nitrogen brings vine without potatoes. If a heavy application is made, half may be applied in the row and half spread, otherwise distribute it all.

The automatic potato-planter would be beyond question if it could drop a good piece in every hill. But potatoes are soft and ununiform as compared with corn. You cannot afford to miss one hill in twenty. A planter with a driver and a sensible boy need not miss twenty hills a day. The extra hills will pay for the extra labor.

The ground should be completely shaded in August. Plant enough to do this, say one piece every eighteen inches in rows about thirty-four inches apart, according to variety. We have been using too little seed. In Ohio fourteen bushels seemed to be about right for varieties of the Carman type. (One of the audience interrupts to report the best results with twenty bushels.)

The question of variety depends upon the locality.

Plant deep to put the roots where there is always moisture. It is usually best not to fill the furrow at first. Strong stocky sprouts are essential. A sprout

planter cannot afford to grow potatoes without spraying. Thoroughness is essential. Make the first application when the plants are six or eight inches high, using Bordeaux mixture according to spray calendar directions. Use arsenate of lead for bugs. It is cheaper than Paris green and carries better. Repeat the spraying every week or ten days throughout the season, making the Bordeaux mixture stronger for the later applications. When the lines spread wide it pays to use two nozzles for each row. Two light, even applications are better than one heavy one. Early blight is harder to control than late. Spraying helps, but it pays to use a resistant variety. Make this a point in selecting seed.

#### The Cream of the Discussion

As is usual with Farmers' Week exercises, the latter part of the period was given over to an open parliament upon the subject under consideration. Some of the questions and answers follow:

In Northern Pennsylvania do late-planted potatoes suffer less from blight than early planted?

Yes. In the southern part of the state, the earlier the planting, the surer the crop.

Does blight affect potatoes for seed purposes?

The Geneva, New York, Experiment Station reports no serious results from the use of seed from hills killed by late blight. But the buds are not as vigorous and there will be more missing hills. Seed from blight-free hills is more likely to be blight-resistant.

Would you use seconds for seed?

It depends upon the hill from which it came. We reproduce the parent plant, not the parent potato. In selecting seed choose the best hills, those in which the tubers crack the soil. The best time to stake the good hills is just before the tops go down. Dig these first and take good care of them. The best growers are following this method.

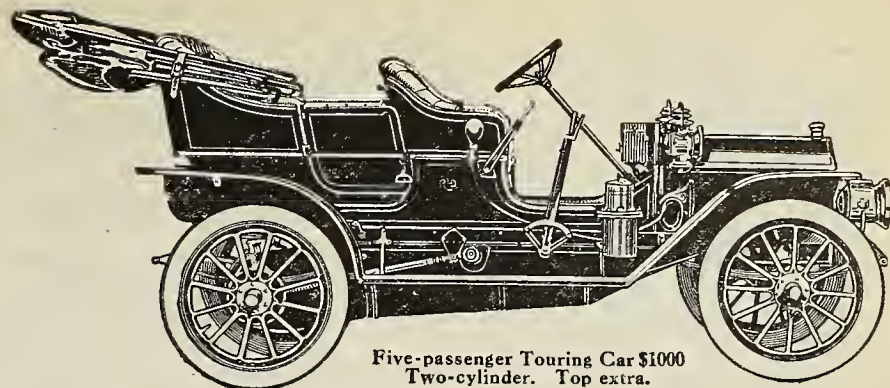
Would you use a seed-cutter?

A perfect stand is necessary. The machine cannot see the eyes, or the dark streaks. Potatoes that cut hard do not make good hills. The machine does not throw them out. It is true that hand labor is costly, yet Professor Agee could afford it on his farm.

Would you use Northern-grown seed?

South of Philadelphia it is best to buy Northern seed every other year.

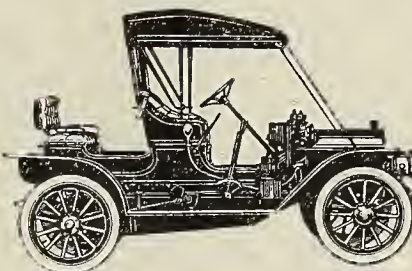
And at five-fifteen the audience was reluctant to go. PAUL W.



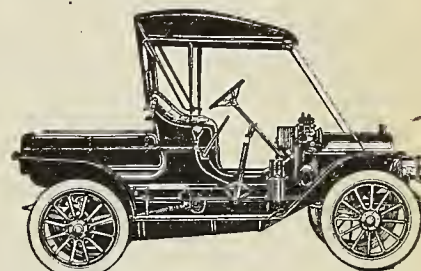
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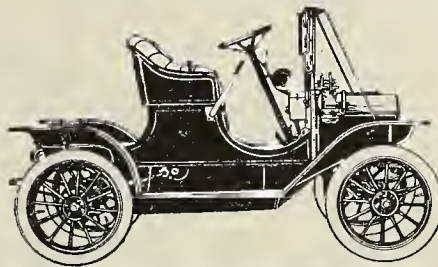
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## The Bee-Keeper's Dread

WE, of the uninitiated, who dearly love the golden product of the hive, who read Maeterlinck's "The Bee," and Burroughs' "Locusts and Wild Honey," books filled with the poetry of bee-life, its wonderful transformation and works, never think that these industrious workers have their plagues and enemies as well as the human family and their animal brothers. The poetry of the hive is not all poetry, at least not to the bee-keeper. Constant vigilance is the price of his success. Let him but neglect one hive that contains the germs of disease, and his colony is doomed.

Bees are not afflicted by many diseases, but those that do plague them are all powerful. Chief among them is foul-brood. Most authorities agree that this dread scourge, that has been known to destroy entire apiaries, is caused by a microscopic vegetable growth. The seeds or spores of this fungoid growth are formed in the honey. They feed and grow on the larvæ of the bees.

Those who do not know the interior arrangement of a hive must know that not all the cells are filled with honey. There must be some brood-cells, those in which the queen bee lays the eggs, which grow into larvæ and finally develop into workers, drones or queens, according to the kind of food and care that is given them. If, in any manner, the disease germ should be introduced into one of these cells, its occupant is doomed.

House Document, Volume 68, 1895-96, Honey-Bee Experiment Station Handbook, gives the symptoms of foul-brood as follows:

"First symptom is lack of energy among colony, on account of failure to rear brood; second, dead larvæ turned black in cells; finally, sunken caps, some perforated slightly over larvæ and pupæ. When the keeper notices these symptoms, he should immediately open the cells. If a brown putrid mass lies within, which, when lifted on the end of a sliver of wood, glides back into the cell or strings down like thick syrup, foul-brood is

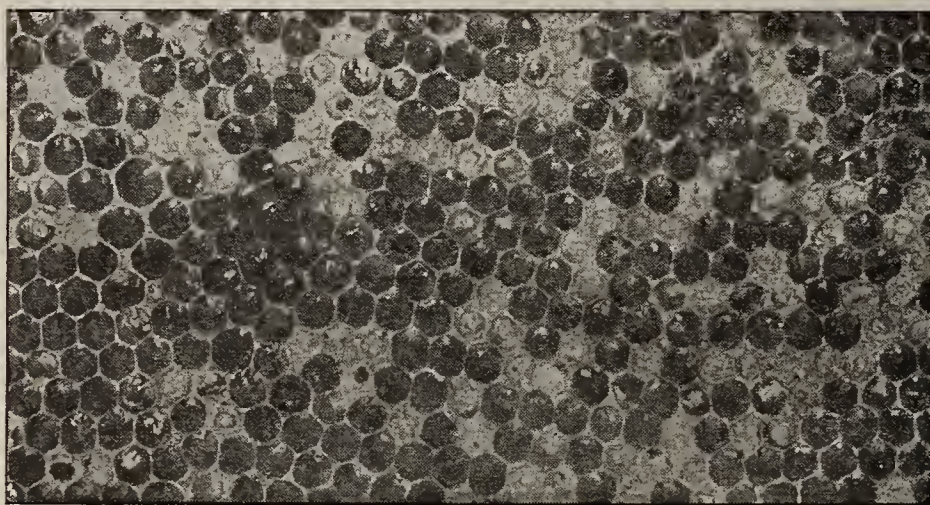
present." The keeper must go to work quickly to stamp it out, else he will lose his entire colony and perhaps more. A noisome odor comes from the dead brood, which is never forgotten if once experienced.

Bee-men do not all agree as to the way to treat the disease. But the exact method does not matter so long as the infection is wiped out. The old method was to burn the hive and its contents. This is certainly the safest way, but thoughtful men have come to the conclusion that such a means is an unnecessary waste of property, except in extreme cases. The theory that the germs are contained in the honey is responsible for the treatment successfully used by many bee-men to-day. The bees are removed to an empty hive and placed in a cellar or other cool place for several days until they have digested all the honey in their stomachs. They are then taken out and fed, given clean foundation, and the disease is wiped out. The combs are dipped in boiling water, or a solution composed of eight grains of salicylic acid,

things now stand, if a man does not want the inspector to enter his apiary, the latter has no authority to do so.

For a number of years prominent bee-keepers of the state have been trying to get a law passed, giving the inspector the power to enter any apiary, and if foul-brood exists to treat it according to the best known methods. Of course the inspector would have to be a capable, conscientious man, with a thorough knowledge of the business.

Up to the present they have not succeeded in getting the desired legislation. There are several reasons for failure. One is the "to-be-expected" ignorance of the legislators on the subject of foul-brood. "Why all this fuss over a few dead bugs?" say they. So might we also say about the dreadful scourges of our wealth-producing animals—hog cholera, tuberculosis, anthrax. Another reason is that a few bee-keepers are averse to the bill. Their minds are not yet opened to the benefit to be derived from a state inspector. They think it only another political and money-making scheme. But



Comb Showing Typical Foul-Brood—Note Ragged Perforations in Several Cell-Caps

eight grains of soda borax and one ounce of water. This effectually kills the germs. The hive may be scalded or else burned out by directing the flames from a blow-torch on every portion of it. Some keepers say it is not necessary to disinfect the old hive, but most of them insist on it.

One man at the last meeting of the Illinois Bee-Keepers' Association questioned the advisability of using chemicals in any form to treat the disease. In France and Germany chemicals have been used to good effect. Muth advises to drum the bees into a clean hive filled with foundation, shut them in and feed honey or syrup, to each quart of which has been added sixteen ounces each of salicylic acid and soda borax. The problem, however, is rather to prevent than to cure.

The greatest care must be taken in treating a hive, in order not to spread the disease. The keeper must be extremely careful before going to another hive after working with an infected colony. He must thoroughly disinfect his hands and all tools he has used, and some even say that the clothing should be taken off immediately and boiled.

When we realize that these disease germs are so tiny that the slightest breeze may waft them to another resting-place, too great care does not seem possible. A bee may leave the hive carrying with it some of the spores of foul-brood. It alights upon a flower and leaves the contamination there. Along comes another worker, legs heavy with pollen, lights upon the same flower and proceeds to explore its depths. Straight away it flies to another hive whose owner never suspects the plague that will soon lay a hand upon his enterprise, until one day the noisome odor meets his nostrils. And the beautiful, brilliant flower has all unconsciously held the germ of death and decay.

Such authorities as Langstroth, Cheshire, Cook, Dadant and others recognize the severity of this disease. In Illinois the Bee-Keepers' Association regularly elect an inspector, whose duty it is to visit all apiaries and take steps to treat or eradicate the disease when found. Often the greatest danger lies in the few colonies kept as a side issue by the farmer who does not care to go to the trouble of investigating probable sickness. His neighbor, who makes a business of honey marketing, must suffer for the ignorance of this small bee-keeper. At present the foul-brood inspector has not the law behind him, only the good-will of the progressive apiarists who realize the dire need of such inspection. Therefore, as

the men who know are still pushing the question. They know that if radical methods are not resorted to the honey industry of the state will hardly be able to maintain itself. Every state that has legislation on this subject has had the same trouble to get this law passed, the usual reason being ignorance of its need by the legislators. Kansas and Missouri have foul-brood laws, and Illinois will have as soon as the bee-keepers succeed in impressing the law-makers with its necessity.

MRS. ERNEST B. SNIDER.

## Salt as a Fertilizer

A SUBSCRIBER asks: "What virtue is there in salt as a fertilizer?"

Very little, if any. There are occasional reports of benefit from the use of salt, particularly in the way of brightening and stiffening the straw of cereals, but they are more than offset by reports of damage.

In a recent work entitled "Principles of Soil Fertility," Professor Vivian, of Ohio State University, says:

"Salt was among the first substances to be used as a manure, but in spite of the antiquity of its use the value of salt as a fertilizer is still in dispute. It is certain that injury quite as often as benefit has resulted from its application. In fact, it may be said that there are no experiments of any note which indicate that salt has any beneficial effect on plant growth. Many so-called agricultural salts are on the market, but they certainly do not possess any virtue not found in common salt, and it is doubtful if there is any manurial value in salt of any kind."

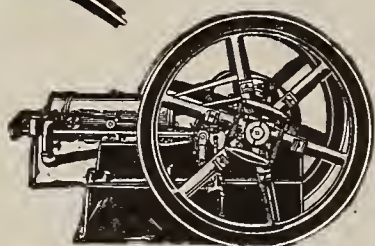
However, if you wish to experiment with salt on your own soil, use common salt in moderate quantities, say two hundred to three hundred pounds to the acre. If the application is beneficial in test plots, and you should decide to use it in a larger way, there is no need to buy the higher-priced salts on the market, for you can get it much cheaper in the crude form in kainit, which also contains potash, a valuable fertilizer.

J. C. B.

Burn all the old straw, egg-shells and debris on the garden or some field. Don't let trash accumulate. Clean up.

Wouldn't it be a good idea to haul the stones off that field before you plow it? Plow and scoop the road out a foot deep, pound in those same stones, cover with dirt, and you can plow better and have a road that lasts.

## Here Is Power You Can Depend On



KEEP ahead of your work and get things done more

rapidly, easily and at less cost by using an I H C gasoline engine. Until you install one of these engines you are not getting all the profit you deserve from your farming operations. It solves the "help" problem. It is the most economical worker on the farm. At any hour of any day or night it is ready to operate the cream separator, the pump, the grinder, the saw, fanning mill, sheller, huller, grindstone, washing machine, lighting system—any one of many such jobs.

Thousands of farmers have come to depend on this most reliable of helpers, an

## I H C Gasoline Engine

Made in Different Styles and Sizes to Suit Every Man's Needs

The I H C line of engines is the most popular on the farm because they are so simple in construction. No previous experience is needed to operate them with complete success. Besides, they develop the greatest power possible from every gallon of gasoline.

Equip a power house at low cost. It will be the biggest paying investment you ever made. Or get a portable engine mounted on trucks or skids.

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There are many styles and sizes, from 1 to 25-horse power—an engine for every section and every problem. Vertical and horizontal (both stationary and portable.) Also gasoline tractors—first-prize-gold-medal winners—the best all-round farm tractors.

Call and take up the matter with our local agent in your town, or write direct for catalogue and further information.

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CHICAGO U S A





## Farm Notes

### What About the Commission Man?

MY EARLIER dealings with commission merchants convinced me that such dealings involve risks for the careless or unsuspecting shipper, and made me bring up the question, in earlier issues of FARM AND FIRESIDE, whether additional safeguards, such as putting the dealer under bonds or making him responsible otherwise, could not be established. This same highly-important subject now hobs up in various places and assumes practical shape. In Minnesota a law is already in force which compels the commission merchant to give bonds and make prompt returns with a statement of the particulars of the sale. A similar bill is at this writing before the legislature of this state (New York).

In an address on "Truck-Farming and Market-Gardening," delivered before the Western New York Horticultural Society at Rochester, January 27th of this year, Prof. L. C. Corbett, horticulturist of the Bureau of Plant Industry, United States Department of Agriculture, suggested the advisability of federal legal action. As near as I can remember his words, he said: "We shall probably always be dependent upon the commission men to handle highly-perishable products, such as small fruits, peaches and truck crops. Since the commission man handles commodities which represent an investment of labor and capital, it has occurred to me that the commission business is in one respect like the banking business, in that we deposit with the commission man our produce just as we deposit with the bank our hard cash which represents the result of our labor. The difference is that we send our goods to the commission man and tell him to do what he pleases with it and return to us what he has a mind to, while our banks have been hedged about by state and federal laws, and are supervised by inspectors to protect us from loss."

It is true that most commission merchants do an interstate business, and their operations could probably be easily handled under a provision of the interstate commerce act. But state laws may do well enough.

We shippers must admit that we need the commission man. But we want a square deal. We let him handle our goods and collect money for us. In all lines of business it is a general rule that he who handles other people's money must give bonds or other security. The commission man makes the only exception. He may be honest—the standard of honesty is probably just as high among commission merchants as among other business men—but he has not got to be honest unless he chooses to be. And there are some that are outright dishonest.

A law compelling the commission man to give ten-thousand-dollar bonds will put the cheat out of business and relieve the honest fellow of the odium which the other, dishonest one, casts upon the business, and should be welcomed by the honest one. The other provision which enjoins on the commission man the duty of making prompt and full report and return within twenty-four hours after the sale, giving name and address of the buyer, time of sale and price obtained, may not be considered quite palatable by many of them, but it seems an absolute necessity if the shipper is to have a chance to exercise supervision over the actions of his sales-agent in the city. The fake commission man must go. The legitimate commission man can be put in a place where he is free from temptation. All this is worth working for. T. GR.

### Political Seed

WITH a deficit of seventeen million dollars in the post-office department, the government still carries seeds, transportation free, for the five hundred congressmen and senators.

Experience with these seeds years ago demonstrated their utter worthlessness. They are not of new or even good varieties, but are of commonplace varieties and often badly mixed. Old seed with no vitality are palmed off in these distributions.

If the seeds were of some intrinsic value, we would not object to the free distribution, provided our congressmen did not make them a means of vote-getting. The following incident that occurred in our district a few years ago will illustrate our point. Congressman \_\_\_\_\_, anticipating a renomination and wishing to clinch his chances, advertised (free, of course) in all the local papers in the district that farmers de-

siring seed from the department could write him and he would see that they got them. Well, we like this free "ad" business and so we made our request early, to be in on the ground floor. Time passed, but no seeds nor reply came. We repeated the request with the same result. As it was getting late, we sent a third request and maybe we made it a little emphatic. Whereupon there came three small packets of seeds marked Turnip radish, Hanson lettuce and Hollow Crown parsnip—about a tablespoonful of seed all told.

Feeling under heavy obligations to our friend the candidate, we thought best to acknowledge their receipt and did so in the following way:

Congressman \_\_\_\_\_

Dear Sir:—We herewith submit our statement of account for your approval, to wit:

#### DEBIT

To 3 envelopes and 3 sheets paper...\$0.3  
To postage, 3 letters..... .06  
To time, labor and patience..... .00

Total .....\$0.9

#### CREDIT

By 3 pkts. garden-seeds, 3 cts. each...\$0.9

Total .....\$0.9

#### ACCOUNT BALANCED

Is not this a cheap method of buying votes?

Well, he was nominated and shortly after we (never having met him before) were introduced. On the mention of our name thoughts of those seed and that "Account balanced" must have rushed to his brain, as was manifested by the rich color he turned.

Now if the post-office department wants to get on a paying basis, give us parcels post and stop this free-seed-for-votes business.

J. H. HAYNES.

### Jingles for Farmers

FARMER SHIFTLESS moves along  
The same old easy way.  
The burden of his daily song  
Is "farmin' doesn't pay."  
His tools are housed beneath the blue,  
His stock in a leaky barn;  
He loafes around the whole day through  
And spins full many a yarn.

Farmer Stirring hustles 'round  
And gathers in the gold;  
In the city bank he has much funds  
Received from crops well sold.  
His neighbors say, "he prospers well  
In all he undertakes,  
And from his well-tilled fertile farm  
A royal living makes."

M. L. PIPER.



## CROP THIEVES

### How to Exterminate Them



Stevens Visible Loading Repeating Rifle No. 70

If your Dealer hasn't it we will send, express prepaid, on receipt of List Price \$9.00

¶ We guarantee it to be the most accurate .22 caliber Repeating Rifle in the world—remember it carries the Stevens' Guarantee.

¶ You see the cartridge go into the chamber—you know when the gun is loaded. You have fifteen quick shots without reloading—twelve if you use .22 Long Rifle cartridges. Two Models: One takes .22 short only, the other takes any one of three cartridges—.22 short, .22 long and .22 Long Rifle, but the greatest accuracy is obtained by using the .22 Long Rifle exclusively in this model.

¶ Practice now and get after the

Wood Chucks

Gophers

Hawks

Sparrows

Blue Jays

Weasels

Crows

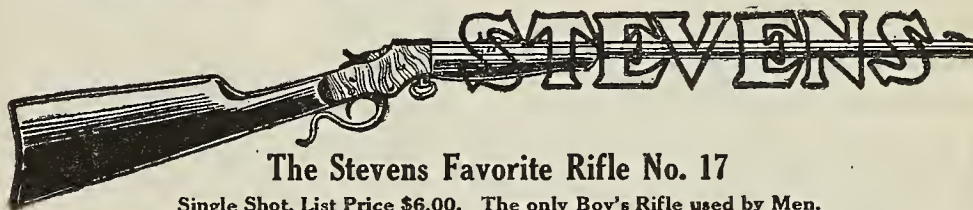
Raccoons

Rabbits

Skunks and other "crop thieves."

¶ The Stevens Visible Loader is sold by all live dealers. Ask him.

¶ Remember, we guarantee this rifle to be the most accurate .22 caliber Repeater in the world.



The Stevens Favorite Rifle No. 17

Single Shot, List Price \$6.00. The only Boy's Rifle used by Men.

### Points for the Sharpshooter, Hunter or Trap Shooter

¶ Write us and tell us what kind of shooting you do and we will write you a letter of advice with many valuable pointers for the Hunter or Sharpshooter. Giving you short cuts to expert marksmanship, which will help you cut down your ammunition bills.

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|----------------------------|--------|-----------------------|--------|
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| Stevens-Maynard Jr. No. 15 | 3.00   | Visible Loader No. 70 | 9.00   |
| Crack Shot No. 16          | 4.00   | Ideal Rifle No. 44    | 10.00  |



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No

Waste

Wire

## Why Pay for Waste Wire

Do not be misled into counting weight per rod as an accurate measure of strength in a wire fence. The size (gauge) of the wire is the only sure test of its strength.

In a rod of wire fencing (where clamps, wraps or ties are used) there are from 150 to 700 clamps, wraps or ties—each one requiring about 1¼ inch of extra material. Consider carefully how much these 150 to 700 inches of wire weigh, and remember, that this extra weight adds nothing to the strength or durability of the fence.

In the "Pittsburgh Perfect" Fence there are no wraps, no clamps, no ties—therefore no waste wire, no dead weight. Take a "Pittsburgh Perfect" and a "wrap", "clamp" or "tie" style fence, each made of the same size (gauge) of wire:—the "Pittsburgh Perfect" will weigh less per rod, or per roll, because there is no waste weight—but will be quite as strong in each wire and stronger as a whole—and it will cost less. The

### "Pittsburgh Perfect" Fence

Is One Solid Piece of Steel Throughout

the wires being electrically welded at every contact point. The selling price of the "Pittsburgh Perfect" is lower than the selling price of any other fence made of the same size (gauge) wire because in buying other fences you have to pay for many pounds of waste material—in the clamps, wraps, or ties—which add nothing to strength, but detract from appearance, effectiveness and durability.

Every wire in the "Pittsburgh Perfect" Fence is of open hearth steel—galvanized by our improved process. The weld is even stronger than the wire. 73 different styles for every fence purpose. Your dealer sells it. Send for free catalog.

PITTSBURGH STEEL CO., Pittsburgh, Pa.

?

Wraps

Clamps

Ties



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With Your Money In Your Pocket No Deposit No Cash With Your Order



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Baggage men, Electric Motormen, Conductors, Experienced necessary. Instruction by MAIL. Application blank and book for stamp.  
Inter Ry. Inst. No. 86, Indianapolis, Ind.

## Grafting by Grading

[CONTINUED FROM PAGE 6]

inspection as a fixed and ordained institution which must not be changed? Is it any wonder they fight every attempt to enforce honest methods of inspection?

The same undergrading applies to every other cereal crop. It entails upon the farmers of this country losses so stupendous that the figures are almost unbelievable and constitute the measure of the farmers' interest in honest and uninfluenced federal inspection of grain.

Dishonest inspection is quite likely to be careless inspection. There is a well-authenticated case on record where one employee of the Chicago Board of Trade inspected two hundred and forty cars of grain in part of a day. This required him to walk more than five miles, to open the cars, take samples, and test, inspect and grade the grain. If he started at daylight in the morning and finished by the opening of the board of trade, he had about five hours in which to work, or about one minute to a car. What he did was to guess at the grade of the grain. He could do nothing more, in that time. Senator McCumber, of North Dakota, cites a case where two car-loads of grain were threshed from the same field and shipped to a terminal elevator. The grain in the two cars was of absolutely equal quality. One car graded No. 2 with very little dockage, and the other car was graded No. 3 with more than double the dockage.

In January of the present year a milling company at Monticello, Illinois, bought six cars of Chicago Contract No. 2 wheat for use. When it arrived at their mill they found the wheat-bin burnt and musty, consequently they could not use it. They did not unload the cars, but shipped them back to the same elevator. When it was inspected into the elevator it was graded No. 3. It was identically the same wheat, never having been out of the

cars. When it was graded for selling purposes it was good No. 2 Red Winter, but when it was shipped back it was musty No. 3 Red Winter. The inspector's judgment seemed to be greatly influenced by the position of the elevator man as buyer or seller.

I recently accompanied a grain inspector on an inspection trip at Chicago. We inspected sixty-eight cars of grain, and every car graded No. 2 and went into a grain hospital. The inspector showed me samples taken from four cars, all clean, plump, hard, healthy wheat, that should have graded No. 1 Northern, if any grain ever grown is entitled to that grade. The inspector remarked that a farmer was a fool to raise grain of that kind and ship it to Chicago market, because he would not get any better grade than he would for the poorer wheat.

He then showed me samples from two other cars. The grain had heated either in the bin or in transit, and he said it should be graded no grade, but he passed them as No. 2, as they did not care to take the time to cut out those two cars. When the railroad terminal is congested an inspector will sometimes pass an entire train-load of grain at one grade, as otherwise the cutting out and switching would delay traffic.

The elevator interests practice another great injustice in sending, at times, to their buyers at the line elevators arbitrary instructions not to give better than a certain grade. No less personage than James J. Hill, of the Great Northern Railroad, has testified under oath of cases where the line elevators were ordered not to grade higher than No. 2 regardless of the quality of the wheat, signifying a loss to the producer of No. 1 of three to six cents per bushel and a corresponding profit to the elevator people.

One of the great objections made to the present system of grain-grading by consumers of grain is the lack of uniformity in the grades. Every terminal market has its own standards, differing as to the quality, description or weight, required to make a certain grade. As a result the consumers of wheat never know what they are getting. No 2 Chicago Winter Red is entirely different from No. 2 Kansas City Winter Red. Frequently a car-load of grain passes through several terminal markets before it finally reaches the consumer, and receives different grades in every market. For instance, a sample of corn was taken from a car graded No. 4 in Kansas City, another sample from a car graded No. 2 at Buffalo. These two samples were submitted to an expert of the Agricultural Department for examination, who pronounced them as being of equal grade and equal value. In another case two cars of corn were shipped from Mason City, Illinois, to St. Louis, Missouri; one graded No. 2 White, the other No. 3 White. These cars were taken from the same bin, were identically the same kind of grain. The car that had been graded No. 2 was then shipped to Nashville, where it graded no grade, three grades less than at St. Louis.

### Agricultural News-Notes

In Ireland, peaches, grapes and tomatoes have to be grown under glass. Apples, plums and pears are largely imported.

It is now thought that the agitation of the subject of the high cost of living will result in the greatly increased use of mutton.

Sage-brush which is so abundant in the vicinity of Reno, Nevada, is now to be used in the making of alcohol and several important by-products.

Mr. George K. Holmes, of the United States Department of Agriculture says: "The canning-factory places the vegetable-garden, the fruit-orchard and the berry-field at the very door of every household in the land during every day in the year."

In a recent message to the Virginia legislature, Governor Mann urged concerted action between the United States Department of Agriculture, the state experiment station and the state board of education for the promotion of education for agricultural purposes.

The consul at Manchester, England, finds that more American apples are sold at that place than elsewhere in Europe and that the best prices are obtained there. He states that Manchester supplies six million people with foreign products.

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Guaranteed for 10 years

We have paid over to the National Surety Company of New York sufficient money to justify them in issuing a guarantee bond with every roll of Congo Roofing which we sell. In other words, the Surety Co. guarantees to make good our guarantee, so you get double protection.

The guarantee bond says in effect that—If your 2 or 3 ply Congo Roof wears out in less than ten years, you are entitled to a new roof without charge.

Surely you will prefer a roofing which we stand ready to back up in this way as against one whose maker is only willing to say that it "should last" ten years, but dares not back it up. Write us for a copy of this guarantee and we will send it to you free; and if your lawyer can find any loop-hole in it for us, we would like to know it.

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What's the use of lifting heavy loads over high wooden wheels when you can have a set of Empire Low Steel Wheels at half the cost? Cut out the strains and drudgery of farm loading by having a set of these everlasting Empires. They save your wooden wheels, save your team and save you. Send for free catalog. **Empire Mfg. Co., Box 568, Quincy, Ill.**

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**BEEKEEPING** Its pleasures and profits, is the theme of that excellent and handsomely illustrated magazine, **CLEANINGS IN BEE CULTURE**. We send it for six months on trial for twenty-five cents, and also send free a 64-page book on bees and our bee supply catalog to all who name this paper. **THE A. I. ROOT CO., Box 7, Medina, Ohio.**

**WHEELS, FREIGHT PAID \$8.75** for 4 Buggy Wheels, Steel Tires. With Rubber Tire, \$15.50. 1 mfg. wheels 3 1/2 to 4 in. tread. Buggy Tops \$3.50, Shafts \$2.00. Top Buries \$3.00. Harness \$5.00. Learn how to buy direct. Catalogue Free. Repair Wheels, \$3.50. Wagon Umbrella rack, F. P. BOOB, Cincinnati, O.

**LEARN TO WRITE ADVERTISEMENTS** IF YOU ARE EARNING LESS THAN \$25 A WEEK we can positively show you by mail how to increase your salary. Send for beautiful prospectus, mailed FREE. **PAGE-DAVIS SCHOOL, Dept. 25, Chicago, Ill.**

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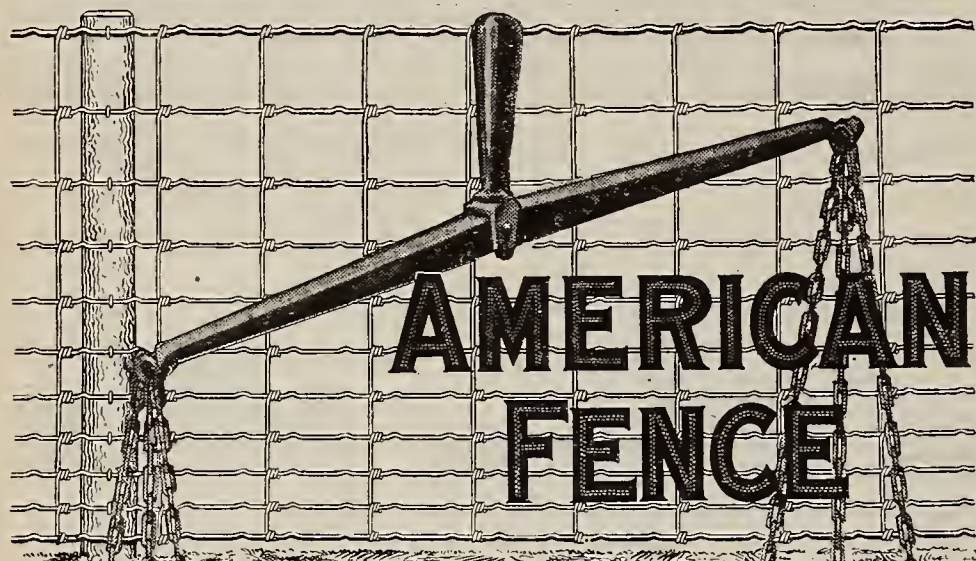
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## A One-Man Improvement Association

[CONTINUED FROM PAGE 3]

was flanked with splendid woods and in spring millions of wild flowers answered his eager eyes. It was alive enough for him!

Then he began to plant his place—to plant it as the average suburbanite plants, by proxy. He ordered his trees from a nursery and had them "put in under contract." They died—some suddenly and others by lingering death.

In the death of these trees was the birth of the one-man improvement association!

"I'm going to find out why they died!" he exclaimed—and dug them up. Their mutilated roots told the story. Then he went to the woods and did his own digging, treating the roots and fibers as tenderly as if they were baby fingers. And when he planted the trees and shrubs in his own yard he made a generous bed and gave them room in which "to stretch." Whenever possible he talked with experienced tree-planters, and then tried out their rules and theories. But the trees themselves were both his books and his teachers. And as their spell grew upon him he increased in knowledge of their ways, their beauties and their infirmities.

After his own yard was well planted his hands still itched for the work he had come to love. Perhaps because no one had ever done a day's work for him without pay, he was moved to push the planting over into his neighbor's yard. Or was it because the memories of those lonely, companionless years when the marks of the "bound-out" yoke were fresh upon his neck, made neighbors seem so good, so pleasant, that he wished to "do for" them? At any rate, he appeared one morning at a neighbor's back door and said:

"John, how would you like to have some nice hard maples—about three of them—in that bare spot in your front yard?"

"Od, I don't know," answered John. "I'm afraid they might shade the grass in time. Why—selling nursery stock?"

"No," was the crisp answer. "I'm not. But I know that fine trees will raise the value of any residence property faster than anything else. They don't depreciate from the minute you put them in. Trees grow in value every year. Besides, I like to see 'em everywhere, and I get my fun planting trees instead of whacking a white ball with a set of expensive sticks. Out in the woods, the other day, I found some fine young sugar-maples where they weren't needed, and took them up to put into some neighbor's yard where they'd help his property and be enjoyed by lots of folks."

That put the thing in a different light—especially the suggestion about the growing property value—and the neighbor responded quickly:

"Sure! It's mighty kind of you, Doc. I hadn't thought about planting trees in that light before, but you're right." And so the trees were planted.

Then, one day, he heard that the big sugar-maple in the school-yard was going to be cut down because it was dying. It was almost as big as the one under which he had stretched himself on hot Sunday afternoons, back on the "bound-out farm" in York State. Cut that tree down? Not if he could help it. And he would help it some way! At daylight, the next morning, he was at work, chiseling and scraping away the dead wood in the great wound that stretched nearly as high as his own head. And after his surgery was done he filled the cavity with cement and closed up the wound that was sapping the life of the splendid old tree. Ah! but it was a good job! Children would play under the shade of that spreading tree for twenty—perhaps fifty—years longer because of his healing ministrations.

So it came that every man in the town who had a wounded or ailing tree came to "the tree man" for his surgery. It cost nothing and was less work than to cut it down! But it was when the larger vision of a Town Beautiful came to this solitary tree-planter, this one-man improvement association, that he really felt the full thrill of his work. He bought a horse and a light wagon and made the special tools which he needed for quick and skilful work. He was in the woods every morning before the dawn was fully upon him and worked as if he had a hay harvest threatened by an oncoming shower. But he was always on the eight-thirty train going to town, dressed as neatly as if he had spent an hour at his toilet instead of a scant ten minutes.

And the few hours of daylight, after

his return from the office, were as frantically filled as his longer morning.

There is a certain street in Glenn Ellyn—a stretch of seven blocks—which the tireless "tree man" planted to hard maples seven years ago. This line of verdure is now the pride, the "show-place," of the town. And there is a country road, leading to a neighboring hamlet, in the fence-corners of which, for a space of seven miles, the tree-planter has set a line of lilacs.

Since "Doc" Johnson began his self-imposed task as public tree-planter for Glenn Ellyn, the town has doubled in population and doubled its property value. Not a single factory has moved into it or been developed by its citizens in that time, and the only industry of which it boasted was discontinued several years ago. The whole increase in population and in property values has been due to the attractiveness of the place as a residence town. And that means the trees and shrubs planted by the one-man improvement association have done their work.

Lately he accepted the office of "Village Forester"—on one condition: That it should carry neither fees nor salary and that an ordinance should be passed for the protection of trees and shrubbery which would embody the ideas worked out by his experience. In the opinion of "Doc" Johnson, one village forester, backed by such an ordinance, can do more for the trees of a town than any improvement association in existence. But he isn't against improvement associations of larger membership than one. He's for them—only there must be one man in every place who *knows how to do the work*.

Each Arbor Day this friend of the trees gathers the school-children about him and shows them, by the "specimens" which he has collected, just what injures trees and how to cure them. He is the friend of the children as well as the trees. Some day he is going to put his collection of "specimens" into a village museum so that they will speak their own lesson to every eye that sees them. But just now his specimens are in too active a service for museum retirement. Clubs and churches and schools in neighboring towns are calling upon him to "come over and show us what kills and what will cure our trees."

And, remember, he has never taken a dollar for anything in connection with this public service! All he asks is the chance to spread the gospel of be-good-to-the-trees. It is his work, and the days are too short for it!

What if every town and village of this country had a citizen of the same sort? The volume of vernal beauty which it would bring to the eyes of men could not be counted in dollars! But, just the same, it would mean millions of dollars in actual property value.

Although the Tree-Planter of Glenn Ellyn has placed children yet unborn in his debt for the beauty, the comfort and the refreshment of noble trees, he has given the public one thing of greater value than the trees themselves—the example of his unselfishness. That, after all, is the really great thing in the work of the Bound-Out Boy! And it will live longer than any tree he has planted.

To serve the common good is no easy job—"and few there be who find it!"

### How Far Shall We Follow the Orient?

[CONTINUED FROM PAGE 5]

pounds of potash and more than 131,700,000 pounds of phosphoric acid.

But in addition to these sources of potash and phosphoric acid the cultivated fields in the Far East receive very large additional contributions from the mountain and hill herbage which is used both directly in the rice-fields and in the making of compost by all three nations. Then there is the entire product of human waste, amounting in Japan alone in 1908 to 5,770,000,000 kan, equal to 23,950,295 tons, which, according to Japanese analyses, carry more than 114,000,000 pounds of potash and more than 93,000,000 pounds of phosphoric acid annually back to her fields.

The remarkable feature of these statements we have made, regarding the maintenance of potash and phosphoric acid in the soils of their fields, is the fact that all of the resources named, except the animal manure, are as yet almost entirely unconsidered and unutilized by us.

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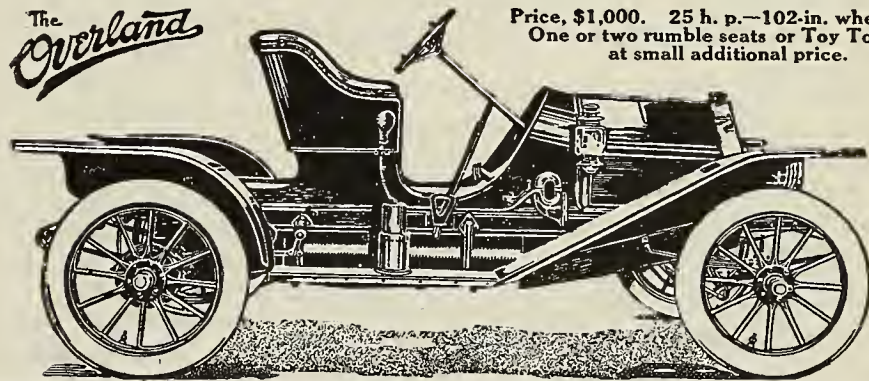
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## The Demands of the National Grange

THE national Grange of the Patrons of Husbandry has a lobby at Washington. It declares that it isn't a lobby, but in the denial it shows itself more concerned for the effect of a mere word than earnest men should be. In its demands, however, the Grange earns our respect. Not everybody's assent will be earned, but respect the well-considered pronouncement of the Grange certainly deserves. It asks for national aid to highway improvement. Many bills have been introduced for this, none of which seem to have a chance to pass. Highways are as important when running from the farm to the town as when extending from the town to the sea. But much will have to be done before the country will budge from its conviction that the roads are peculiarly matters for the counties and the states.

The second demand of the Grange is parcels post. It is a cause in which all the progressive forces of the nation will one of these days be found working together victoriously.

The Grange is for postal savings banks. Furthermore, it is for the investment of the funds in the vicinity of the deposit. Here is the rub. Most of us are for postal savings banks; but there are all sorts of plans. The bills now pending are likely to be defeated by divided counsels among friends of the principle. The President has placed himself on record as favoring the investment of the deposits in the nation's bonds. He has in his favor the constitution and the fact that most foreign postal savings banks are operated with reference to the nation's becoming the borrower of the deposits. He has against him the people who see in the plan a device for getting the bonds of the nation out of the hands of the national banks, preparatory to the setting up of a central bank of issue. One would think that the nation might better consider the President's proposal on its merits and fight the central bank when the time comes—on its demerits.

The Grange favors extension work in agricultural education. So do we all, we hope. The demand is statesmanlike. Election of United States senators by direct vote is another measure in the advocacy of which the Grange aligns itself with the best thought. In opposing the ship subsidy the Grange no doubt represents the mature judgment of the farmers of the nation. In opposing the repeal of the oleo law, it will be supported by a great preponderance of the opinion of the states north of the cotton-oil belt—and by dairy interests everywhere. In opposing the Aldrich proposal for a central bank of issue, the Grange voices the feeling of the people that this gigantic scheme looks sinister and dangerous. Leslie M. Shaw's statements that such a bank would surely be controlled by Standard Oil and United States Steel, and that those controlling it could well afford to pay the national debt in exchange for the charter will have to be explained away before the people will assent to such a basic change in our currency system. And in its stand in favor of the conservation of national resources the Grange is safe, sane and progressive.

Altogether, the Grange may be congratulated on its demonstration that the farmers are not "agrarian agitators," but plain Americans, with the same intelligent insight into our problems that other sane and intelligent people have—and that their "isms" are those which make for progress.

\* \* \*

Form a farmers' combine, and all combine to lighten mother's daily burdens.

This country just now is interested—farm and city alike—in seeing more men farm as others are already farming.

The National Good Roads Association in convention recently recommended that the enlisted men of the army be used in making good roads. The idea is worth considering. The soldier is a patriot, and how better could he serve his country than by beautifying and making more serviceable her roadways. We remember, too, that wherever Cæsar and his legions went good roads followed.

Many a man who thought he could lift the mortgage has been lifted by it.

We need more farmers and their wives who put their feet on the stove foot-rails and their heads together for the discussion of affairs in the home and around the farm.

The first man was a farmer. If he could have lived on his Eden farm until the present time and had been progressive from the beginning, he would still be finding out new wrinkles.

## Knowledge Comes, but Wisdom Lingers

SO SAID Tennyson fifty years ago. We are accumulating knowledge every day. Just how fast our wisdom marches is quite another thing. In the line of knowledge, listen to what Prof. Alfred Vivian said at the last meeting of the Ohio Live Stock Association: "Live-stock feeding is purely a chemical and physiological question. Agriculture is largely a chemical question, and a knowledge of chemistry is quite essential in all lines of husbandry." And all this is perfectly true. A writer in the Saturday Evening Post recently stated that he is making a success in a new country by pure "book farming." This being so, it shows that the mere knowledge necessary for success in farming is now so organized as to be within the reach of all.

So much for knowledge. All we lack, now, is wisdom. We need the wisdom to use our knowledge. We have forests of guide-posts and bales of road maps. Let us make our journey according to their teachings and we shall do better. We "practical" farmers need wisdom according to our knowledge. We all know about the balanced ration and the laws of soil upkeep—but we feed our beasts on the handiest things and exploit the soil like posterity-robbers. None of us knows any too much, but there are many who would do well to trade off some of their knowledge for a little wisdom. And the greatest thing lacking in our system is wisdom to make of our boys and girls the chemists and physiologists they need to be without tearing their roots from the soil of the farm; wisdom to educate properly.

\* \* \*

There are three kinds of farming—intensive, extensive and expensive.

When your life touches that of some other farmer, let the fire of a new thought flash between you. Get something good to take back to your own home, and be just as glad to give something back in return.

## Flowers With Little Labor

WITH farm labor scarce and every hour filled with pressing duties, the neglect of the flower-bed may be excused. But flowers are only one form of beauty and if all the beautiful in life is neglected, what is life worth? It is the beauty of the life on the farm which holds the boys and girls, and not its profits. The happiness crop is, really, the thing we all are seeking to perfect. After all, then, flowers may be needed in the rotation. They need not take much labor, and they may be had for scarcely any money. The bed of annuals is well worth while, but the perennials come year after year to gladden the place in life to which Providence and provident care has called them. After the first planting, all they ask is a little care once in a while. Lilies-of-the-valley, iris, peonies, aquilegia, bleeding-heart, lilies of various sorts, dozens of the gay volunteers are to be gathered up for the asking in any neighborhood or bought cheaply from the dealers. They give individuality to a farm. More people will remember the place where the yellow Persian roses are so beautiful or where the Japanese lilies bloomed last summer than the dwelling of the prize hogs or the champion fowls. You will remember the roses longer yourself, when the days of work are over, and you haven't much to do but think and remember. There isn't any money in flowers—not a cent—but there is something that money can't buy in them when they bloom for you about your own home. Put half a day into flowers this spring.

## Highest Prices Known for Hogs

FEBRUARY 28, 1910, will be a historic date in the swine trade. For the first time since the resumption of specie payments, the price touched ten dollars a hundred on the Chicago market. On that date sixty-four hogs averaging two hundred and sixty-four pounds were sold for ten dollars a hundred. Their fortunate owner went away with \$1,689.60 for the bunch. In August, 1870, the market rose to \$10.12 1/2. In December, 1869, they brought \$11.65, while in 1865 the price was at one time as high as \$13.25. These sales, however, were under financial and agricultural conditions much different from those of to-day. As might have been expected, few farmers are able to benefit by these high prices. Only 9,291 hogs were received that day in Chicago, 9,900 in St. Louis, 9,000 in Kansas City, 6,700 in Omaha, 4,200 in St. Joseph, 9,264 in New York, 3,600 in Sioux City, sixty cars in Buffalo, 2,500 head in Cleveland, 2,000 in Indianapolis, where they touched \$10.05, and 6,000 in Pittsburg. It is perfectly clear that while a few farmers are drawing prizes, and some of them sacrificing their brood sows, and thus killing the goose that lays the golden eggs, most of them would be vastly better off if prices could rule higher when they have hogs and lower when they have them not. In the meantime the cold-storage warehouses are giving up their hoards on the basis of ten dollars a hundred for the ultimate consumer. Moral—try to have some hogs for every market.

\* \* \*

Have faith enough in your farming to invest yourself and all you are in it. The man who does that is sure of grand returns.

The only man who can successfully direct the affairs of a farm is the one who has it in him to control his own heart, mind and soul.

## Governments in Business

THE old landmarks of governmental limits seem to be doomed to removal. The projects of the Province of Manitoba to build government-owned stock-yards and government-owned grain-elevators seem sure to be carried through next year, as both parties in the provincial parliament are in favor of the measures. This progressive province bought all the telephone lines, urban and rural, only a few years ago and has reduced telephone charges from twenty-five to 60 per cent. In Alberta and Saskatchewan the telephones have also been taken over by the governments, but they are proceeding slowly in the matter of reductions in tolls, as the impression seems to be general that Manitoba went too far in this, and will have to raise the charges again. Manitoba, however, seems convinced that she can cut down elevator and stock-yards charges, as well as expenses in slaughtering, as radically as she has slashed telephone tolls. If these experiments succeed, their effects on the beef, swine and grain business in this country cannot fail to be important.

\* \* \*

If you haven't any boys on the farm, teach the girls how. They make fine farm helps at the lighter work.

Don't forget to graft those old useless trees this spring with grafts from good fruit-trees; and try to find room for at least six apple, peach or pear trees. Fruit is never too plenty in the world.

## Who Has Tried the Kudzu?

WHICH of our readers has given the Japanese kudzu vine a trial for forage purposes? The Department of Agricultural recommends it as worth experimenting with on rocky hillsides or steep places not fit for culture. In a private letter one of the experimenters expresses the feeling that it may be useful on other and better soils. The writer means to give it a test on some stony places in West Virginia. It is a legume, has a starchy root, grows vines fifty feet long in Florida and only a trifle shorter in the vicinity of Washington, and bears foliage that is described as tasting "like clover." Who has tried it?





**H**ERE in Washington the disposition still is to credit President Taft with sincere purpose of progressiveness, but more and more to assume that he is taking bad advice, is too much insulated from the currents of real public feeling and is under domination of the Aldrich-Cannon influences.

No man is permitted to look into another man's heart and see what is there, whether it is good or bad. By their fruits only is it given to us to know them. And by its fruits, or rather its barrenness of fruits, we are compelled to judge the present administration, so far as it has gone, a failure.

I am going to set down a plain recital of some facts about certain pending legislation and let the reader judge for himself.

First, then, the postal savings bank measure. From the beginning of its consideration this session the real contest over this measure has been a contest for control of the funds that would be deposited in the postal banks. Wall Street wanted them to pour into the reservoir of cash with which it floats its water-logged projects in combination and inflation. The country wanted it left where it could serve the country's uses.

The progressive Republicans and most Democrats in the Senate have been contending that postal bank deposits should be redeposited by the government in the banks of the same communities in which the postal banks first receive them. That proposition being finally forced into the measure, Senator Smoot offered an amendment which in substance said that once deposited in the local banks, the money could not be drained off, after a time, to Chicago and New York and the other big financial centers. Now comes Senator Root.

He offered an amendment providing that the money may be used to buy government bonds. The intention of this was to use the postal bank funds to buy up the two-per-cent government bonds, now mainly held by national banks, and by them used as security for national bank circulation. For, you understand, the Aldrich currency reform plan contemplated stopping circulation issues by national banks, and putting it entirely in control of the central bank. With the circulation privilege ended, these two-per-cent bonds would lose much of their value to the banks; and, therefore, the national bankers, rather than stand such a loss, would oppose the central bank plan and probably defeat it. To take care of the bond-owning bankers, it was proposed to pass the Root amendment and have the money used to take up these bonds. Three purposes would be served: The bankers would be saved from loss, the way would be opened for putting through the central bank plan and the postal bank cash would go to the national banks, and thereafter be redeposited without restriction in the banks in financial centers which feed Wall Street.

President Taft went to New York and made a speech, declaring that the Root amendment must be adopted; and Wall Street felt easier for three whole days. At the end of that time the Senate had been canvassed and it had developed that just ten votes could be mustered for that proposition.

Whereupon the President dropped it, and the Aldrich coterie took a new tack to accomplish the same end. Senator Smoot was summoned to the White House and told that his amendment was a mistake and ought to be withdrawn. He demurred and said the Senate, not he, must decide; and at the time I write the whole matter is in suspense. The Root-Aldrich forces are determined to have their way, directly or indirectly. Senator Smoot has been induced to offer a new amendment that when a postal bank depositor has two hundred dollars to his credit he may ask that it be converted into a government bond for his benefit. The opponents of the Root-Wall Street program are studying this proposal, trying to find out whether it is safe; and they are suspicious of it, too.

From all this and from the various polls of the Senate, it is believed that a good and safe postal bank bill will finally pass the Senate if the President is not enlisted again to back some new form of Root amendment whose real significance may be more cleverly concealed.

To sum it up in a word, the people who want a Wall Street postal bank bill hope the President will help them get it. The people who don't want such a bill, remembering how the President killed the income tax measure last session by forcing adoption of the corporation tax substitute, fear everything that has White House approval. If a bad postal bank bill passes, it

By Judson C. Welliver

"Sincere But Misguided"—Is That a Fair Estimate of the President? . . . Ill-Advised Advocacy of an Amendment That Died . . . Postal Savings and the Hunger of Wall Street . . . Insurgent Dissection of the Interstate Commerce Bill . . . Progress With a Question-Mark

will be through the machinations of the forces with which President Taft has been coöperating. If no postal bank bill at all passes, it will be because those forces kill it as a penalty for not being the kind of bill they want. Do you understand why there are misgivings about the President?

\* \* \*

**N**ow let me try to tell about the legislation to amend the interstate commerce law. The party in power is pledged to pass a law strengthening the interstate commerce act. A bill, drafted by Attorney-General Wickersham—Senate Bill 5,106—has been reported for passage by a majority of the Senate committee on interstate commerce. A minority report was submitted at the same time, written by Senator Cummins and signed by himself and Senator Clapp. Listen to the characterization of this "progressive" railroad bill by these two veterans in this class of legislation:

"They are of the opinion that the bill as reported by the committee, instead of being an advance in the regulation of interstate commerce, is a long step backward, and the bill, if it becomes a law, will seriously impair the efficiency of existing statutes."

That is the opinion of two strong Republicans. It is the opinion of Senator Cummins, for many years a great railroad lawyer, who, when he took a brief for the people, had to fight for twelve years against all the powers of railroad politics in his state, and to defeat them, before he could get recognition and the right to speak from a Senate seat. It is the verdict of every one of the Republican senators who last year had the courage to stand aloof from their party and vote against the Aldrich tariff bill. It is the declaration of a great body of the best legal and political opinion of the country.

Let it be remembered that the bill was reported from committee by a vote of six to four, thus:

For reporting—Senators Elkins, Aldrich, Kean, Culom, Crane and Nixon.

Against reporting—Senators Cummins, Clapp, Newlands and Hughes.

Absent and not voting—Senators Tillman, Foster and Taylor.

The last three, being Democrats, would probably have voted against the report had they been present, and the bill would have been rejected.

Of which group would you prefer to accept the judgment? Of Aldrich, for many years the arch-agent of Big Business in the Senate; of Elkins and Kean, themselves multi-millionaires and legislative representatives of the opinions of Big Business; of Crane and Nixon, two more of the richest men in public life and always spokesmen of the interest of great corporations; or would you prefer the judgment of the majority of the committee, two independent Republicans and five Democrats, free from such ties and interests?

Yet the bill is reported, and the Aldrich-Hale-Taft-Wickersham forces are determined that it shall pass.

The Cummins-Clapp report points out that under present law, when a railroad sues to enjoin the order of the Interstate Commerce Commission, the commission is defendant and commonly hires, as its lawyer, the one who conducted the original inquiry before the commission and who is most familiar with the case. But the bill as reported proposes that suits attacking orders of the commission shall be brought against the United States; the commission is excluded from all participation; and the defense is wholly in the hands of the attorney-general. The report says:

"It is our deliberate judgment that this transfer of responsibility and power will destroy in large measure the efficiency of the law. . . . Shippers complain to the commission, and with infinite care and labor make their case, and the commission awards them a remedy. The railway companies assail the order in court. These shippers are just as much concerned in the judg-

ment of the court as they were in the award of the commission, but they are not only deprived of any influence or control of the matter thereafter, but the commission itself is forbidden to take an interest in it. The whole subject passes into the hands of the Department of Justice, which, although equipped with excellent lawyers, neither knows anything about the case, nor has any but an abstract interest in it. The Department of Justice makes itself familiar with the work done by the commission and then may either defend or not defend, as it pleases. If it believes the commission was wrong in its order, it would, of course, allow final judgment in favor of the carrier. Thus is the amazing spectacle presented of a review of the orders of the commission not by a court, but by the Department of Justice. Not only so, but if it should happen that the peace and quiet of business required at that particular time a lax administration of the law, we assume that the Department of Justice would feel that it ought to be a little tender on the common carriers, lest a financial or commercial disturbance might ensue."

Senator Cummins' report points out that Section 7 of the bill actually repeals the Sherman anti-trust law with respect to agreements among railroads respecting rates and classifications.

Beyond these things, the Cummins-Clapp report charges that the Court of Commerce, provided for in the bill, to try all cases on appeal from the interstate commission, is unnecessary and would weaken the law; that the new measure would make the consolidation of railroads easier than ever before; that water carriers are exempted entirely from the act; so that the transcontinental railroads could own and control every ship doing business between the Atlantic and Pacific coasts via the Panama Canal when it is completed, and absolutely prevent their competition reducing transcontinental rates. It is pointed out, also, that electric railroads are not included within the law's prohibitions against one railroad acquiring the stock of a parallel and competing line. Therefore, a steam railroad could buy up all the electric roads in its section, as the New York, New Haven & Hartford road has done in New England, or it would be possible for an electric railway corporation to buy and hold the stocks of all the steam railroads it liked exactly as the Northern Securities company came into control of three great systems.

But there is a more remarkable thing than any of these, in this bill.

In order that it should be certain that the court's power in reviewing orders of the Interstate Commerce Commission should not be made broader than now, the attorney-general agreed, at the insistence of Messrs. Cummins and Clapp, to put into the measure this provision:

"But nothing herein shall be construed as enlarging the jurisdiction now possessed by the circuit courts of the United States or the judges thereof, which jurisdiction is hereby vested in and transferred to the Court of Commerce."

That is, it was specified that the present "limited court review" should not be broadened so as to permit the court to entirely nullify the law by overturning the decisions of the commission, which seemed absolutely fair. But Senator Aldrich insisted that that provision must go out, and the way be left open for the Court of Commerce to widen its review if it chose, and assume power to break down the whole legislation by judicial construction. In demanding this, Senator Aldrich declared he was doing it because the President so insisted.

If Senator Aldrich told the fact, then President Taft favors a plan which would practically leave all rate regulation to the courts and make the commission powerless and utterly inefficient. That is just what the country has long been determined must not be done. Mr. Aldrich insists it is just what the President wants done.

One more feature of this marvelous "progressive" railroad measure. It undertakes to establish some restrictions against overcapitalization. These restrictions are declared by careful critics of the measure, not only to be ineffective, but to open the way to legalize overcapitalization accomplished in the past and open the way for more of it in the future.

Before this measure passes, it is going to be the subject of one of the most historic debates of recent years. And the real theme of that debate will be: "Is this measure a bungling but sincere effort at progress, or is it a devious, dishonest effort to break down the whole interstate commerce legislation?"

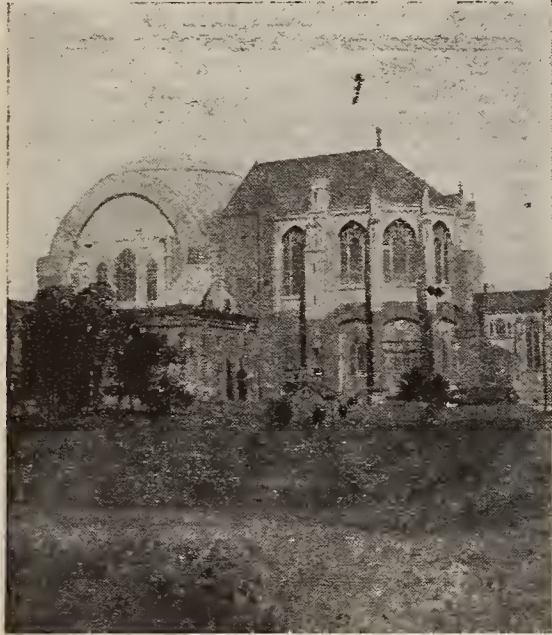


# Easter in the World's Greatest City

By Richard Maxwell Winans

**E**ASTER day in the world's greatest city is essentially a gala affair; a world of color, of new dresses and bright flowers, of greeting and giving, of smiles and laughter, of joyous gaiety and happy faces; an awakening to a new life of social enjoyment after the quiet of Lent.

Easter day in cosmopolitan New York City is given over to show and parade, to the display of dress on the streets, to beautifully elaborate musical services in the churches and magnificent floral decorations in



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Cathedral of St. John, the Divine, under construction. Additions to be made at left, or western, end

these churches, in the hotels, in public places and in the homes. The Easter atmosphere is everywhere.

The amount of money annually spent for flowers in this greatest city of the world reaches a total so large that it makes not only the people of the country districts and of the inland towns exclaim in amazement, but is enough to give pause for wonder to the folk who make up the population of this great city by the sea.

Every day of the year the people of Greater New York spend from fifty to sixty thousand dollars for flowers that are grown in near-by hothouses and florists' gardens, or that are shipped from long distances, from up-state New York, from New Jersey, Pennsylvania and often from as far west as Chicago, and the receipts of the Greater City's florists every year will range close to twenty million dollars. Of these florists' shops there are over four hundred in the Borough of Manhattan, or old New York, alone.

This sum does not include the millions spent by the wealthy in private greenhouses and conservatories, nor the twenty-five thousand dollars for the up-keep of the New York Botanical Gardens in Bronx Park, nor the nearly fifty thousand dollars spent on flowers in Central Park and in the minor parks of Manhattan, Queens and Richmond, nor the hundreds of thousands of dollars spent on private flower-beds within the city limits.

The total sum of money that is annually paid out to the account of flowers in Greater New York probably amounts to about fifty millions of dollars, or approximately twelve dollars and a half per capita for its over four million people. But there are hundreds and thousands of the city's poorer classes who seldom ever see a flower, much less having the pleasure of owning one. To these less fortunate children of the great city the possession of a bouquet, even of a single flower, marks a red-letter day for them; a day that may come but once.

To the rich, however, a profusion of flowers is a part of their daily life, and, upon occasion, the expenditure for blooms and plants sometimes reaches surprising sums. Oftentimes, after these flowers have graced the homes of the rich they are sent to bring

comfort and cheer to the unfortunate shut-ins in the hospitals.

However, the average daily expenditure for flowers during the year is made to look quite commonplace, by comparison, when we learn that nearly a million dollars is spent on Easter flowers for bloom and plants that are to be had at that time; and a million dollars would cover the cost of running a tremendously big flower garden for the production of one day's crop of flowers.

But there is no one posy-bed large enough to grow the supply of bloom for New York City even for one ordinary day's demand, much less for such an occasion as Easter. To meet the demands for Easter day in New York City the flower-gardens of several countries are drawn upon.

Lily-buds that come from Bermuda are in bloom in New York homes and churches and hotels and public places at Easter-time, and they come also from our little island in the south Pacific, Hawaii and Formosa and China and Japan. And the other flowers that go to make up the Easter display come from almost every flower-producing clime and country.

The beautiful, delicate, expensive orchids come from South America and Africa. The most popular of these, the cattleyas, sometimes sell at wholesale for as high as one hundred dollars per dozen at Easter. In the Bronx Park Garden alone the collection of orchids is valued at something like seventy-five thousand dollars.

Easter hyacinths come from the great flower-fields of sunny southern France; begonias, azaleas and rhododendrons from Belgium, the setting-in ferns from the far Australian brush, and all kinds of palms are received from Holland and Belgium.

The Easter season roses and other flowers, from the queenly American Beauties and carnations to the dainty violets and lilies-of-the-valley, except those that arrive on the sweet-scented flower ships from the islands of the gulf, are supplied by growers in the Eastern states.

To cater to the esthetic appetite of the New Yorker, as manifested by their taste for flowers, there are over ten thousand persons engaged in the five boroughs of New York alone. This number takes no account of the large army of growers who are employed in producing flowers in this and other countries for shipment to this city.

The display here at Easter is impressive and magnificent, with the grand profusion of lilies, tulips, narcissi, daffodils, jonquils, lilies-of-the-valley, azaleas, rhododendrons, geraniums, hyacinths, violets, carnations and other beautiful bloom surrounded by their setting of ferns and palms and the wealth of green leaves that furnish such a beautiful background.

In this attractive market where thousands of dollars daily change hands, the prices are established by a board of expert judges of value.

American Beauty roses are graded alone by the length of their stems. The "specials" must have stems measuring thirty-six inches or over; the "fancies," twenty-four inches or over; the "extras," fifteen inches; the No. 1's, ten inches; while all under that are classed as "culls."

At Easter when they are scarce they sometimes retail at three dollars apiece, gardenias for as much as four dollars each, orchids at five and ten dollars apiece, and occasionally more.

Fine specimens of carnations when in demand sell wholesale as high as four dollars each, and at other times from five to thirty dollars per hundred. Twenty years ago there were only six varieties of carnations grown for the trade. To-day there are over fifty, while more than four hundred variations claim the attention of greenhouse men. It is interesting to note in this connection that the sum of fifty thousand dollars was paid by Thomas W. Lawson for a pink bearing his name.

The violet, which is at the height of its sweet-scented reign at Easter, is grown for the Gotham trade mostly about Rhinebeck, although large Easter shipments are made from Boston and as far west as Chicago.

The high-class specimens of this delicate little flower sell at two to five cents for each tiny stem or bloom when in good condition. Sometimes, however, the street vendors sell these little flowers for from five to twenty-five cents a bunch. These are the old, held-over stocks of days before, which they constantly spray with pocket syringes containing cheap, odorous "violet" perfume.

It is only this grade of flowers, long cut and wilting to decay, including roses, carnations, lilies, chrysanthemums and similar flowers, that the poorer classes of the great city can afford to buy; if it can be properly said that they can afford such non-essential luxuries which are so far aside from the actual necessities of physical existence, and pitifully few enough

of these there are who do enjoy even such a poor, withered little bouquet at Easter-time; a time which the wealthy make a season of gorgeous color and perfume and beauty, and it is given to the other millions to behold and in a measure enjoy, although they may not possess.

As at Christmas and other holidays, the Salvation Army remembers the poor, and at Easter their gifts are flowers to those unable to buy these beautiful emblems of a resurrected spring. Their purchases are mostly made of the street flower-vendors who sell cheaply, rather than of the higher-priced florists.

Many thousands of plants and flowers are also distributed among the poor classes by the charitable Five Points Mission on Park Street, down in the great Bowery section where thousands of the great city's unfortunate children would scarce possess a flower were it not for this commendable mission.

The celebration of Easter is by no means an institution of the past, and in New York, the greatest city in the world, there is celebrated the greatest Easter in Christian history; a modern Easter in a modern city.

The Easter day of New York is a new Easter, a day that has absorbed some of the features of some of the other days we celebrate; particularly the gift-giving feature of Christmas, for the giving of Easter gifts in New York is almost as popular now as the giving of Christmas gifts.

The souvenir postal-card may have opened the way to more substantial remembrances, but, come how it may, the Easter gift custom is established, and Easter gifts are among the high-class, expensive kind; so that if one gives at all, as one is quite expected to, and there are many friends to remember, the toll on the purse is by no means light.

Even the Easter day parade has changed; it marks the newest feature in the newer Easter of New York City. The Easter day parade has not passed, is not passing, no more than the noise and fireworks of the Fourth of July, which, too, is changed—but rather increased than lessened.

The Easter parade in New York of to-day was never more alive. It is big, it is great. It radiates the color of the rainbow. It is joyous and filled with the hum of gaiety; an enormous outdoor moving-picture show.



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Salvation Army lassies buying Easter flowers for the poor

full of life and smiles and awakening pleasure, from mid-forenoon to the chill of evening, from Grand Street and the Lower East Side through Madison Square and Central Park far up on Riverside Drive to Grant's Tomb and beyond.

The old Easter parades were made up of the elect of society, of the somebodies to be found in the list of the who's-who in the town, who moved in stately dignity and imposing majesty from the aristocratically exclusive churches to their homes along the avenue, in appearance a little gayer than a fashionable funeral, stiff and slow and formal in their step as a promenade to the music of the dead march in Saul.

That feature of the Easter parade is past and done. The Easter parade of to-day is filled with smiling faces and laughing voices, and it moves lightly and briskly along to the tune of the cheery quick-step beat out by the silent yet sweetly-voiced music of the hearts of hundreds of thousands of merry, joyous, holiday-happy people.

In recent years the Fifth Avenue dwellers, the leaders of ultra-fashionable society, the millionaires and the world-known somebodies, are nearly all in Europe, in the far orient, in the Alps, along the Italian Riviera or our own American Riviera in Florida, in the sunset land of the Golden Gate country or nearer home at Atlantic City, Tuxedo or other out-of-town resorts.

Those of that class who now remain at home and take actual part in the parade go rather to see than to be seen, for it is a notable fact that in the late New York Easter parades the very rich in society have worn their old hats and gowns or those of plain and simple make-up, shunning elaborate toilets and avoiding extremes in styles, leaving their spring finery at home for another day, that they may appear different and not attract attention.

But if the "Four Hundred" shy at appearing

[CONCLUDED ON PAGE 38]



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Easter crowds in front of St. Patrick's Cathedral



# THE SUGAR-PLUM TREE

Words by Eugene Field

By Permission of Charles Scribner's Sons

Music by Will A. Harding

1. Have you ev - er heard of the  
2. When you've got to the tree you would  
3. You say but the word to that

*Allegro moderato.*  
*mf*

Su - gar Plum tree? 'Tis a mar - vel of great re - nown! It blooms on the shore of the  
have a hard time To cap - ture the fruit which I sing; The tree is so tall that no  
gin - ger-bread dog, And he barks with such ter - ri - ble zest That the choc - o - late cat is at

Lol - li - pop Sea, In the gar - den of Shut - Eye Town; The fruit that it bears is so  
per - son could climb To the boughs where the su - gar plums swing! But up in that tree sits a  
once all a - gog, As her swell - ing pro - por - tions at - test; And the choc - o - late cat goes ca -

won - drous - ly sweet (As those who have tast - ed it say) That  
choc - o - late cat And a gin - ger - bread dog prowls be - low; And  
vort - ing a - round From this leaf - y limb un - to that, And the

*cres* *cen* *do.*

good lit - tle chil - dren have on - ly to eat Of that fruit to be hap - py next day.  
this is the way you con - trive to get at Those su - gar plums tempt - ing you so.  
su - gar plums tumble, of course, to the ground, Hur - rah for that choc - o - late cat!

*f*

*D.S.*

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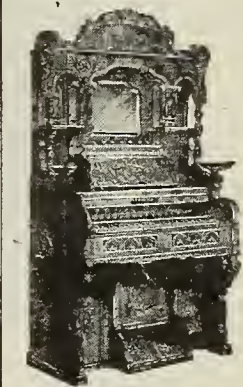
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# The Mysterious Envelope

## Or the Missing One Hundred Thousand Dollars

### A Two-Part Story by Charles Edmonds Walk

Illustrated by R. Emmett Owen

#### Chapter I.

FOR the forty-ninth time Truesdell approached the general-delivery window. He knew it was the forty-ninth time because this was the morning of his seventeenth day in the city, and three daily trips for each of sixteen days—he computed it while awaiting his turn in the line—gave him a total of forty-eight fruitless pilgrimages to the post-office. This was the first trip of the seventeenth day.

During the first few days hope had run high in his bosom that a Letter would be handed to him; a Letter spelt with a capital because it was expected to contain one hundred dollars, which represented, besides the fifty-cent piece at present in his pocket, the sum total of his capital; but the old curmudgeon of an uncle, who had been his guardian since his father's death, had either forgotten him, or else had deliberately appropriated the pitiful little amount to his own use.

The money did not come, at any rate. In fact, nothing at all came. And as hope gradually gave way to despair, and despair to a numb sort of don't-care feeling, the function of giving in his name at the general-delivery window became by degrees a mere habit.

For one thing, it afforded a diversion from another dispiriting routine—namely, tramping through long weary hours over endless pavements in pursuit of that *ignis fatuus*, "a job." Perhaps jobs existed somewhere for somebody; perhaps there were people who actually received letters; his attitude of mind toward both possibilities had grown to be one of sneering skepticism.

He awoke suddenly to the fact that the man in front of him had obtained his mail and departed, and that the clerk was now inquiring his name for the second or third time, with considerable show of impatience.

"Scott R. Truesdell," he uttered perfunctorily and prepared to turn away—for the forty-ninth time—when he was stunned, overwhelmed, rooted to the spot by the sight that greeted his eyes.

The delivery clerk was actually pushing a letter toward him.

In a half-dazed way he picked it up. It was no ordinary letter, this; although, judging by its general appearance, it was more deserving the capital "L" than the tardy Letter which persistently refused to come from his Uncle Seth Truesdell.

His uncle would never have sent any such imposing missive as this. It was in a long, exceedingly heavy envelope which bulged, fairly to the point of bursting, with the surpassing abundance of its contents, and was emblazoned all around the address with canceled stamps. His attention was sharply directed to them by the businesslike tone of the delivery clerk; that overworked functionary was manifestly growing very tired of his awkward stupidity.

"Forty-eight cents due," said the clerk crisply. Truesdell's hand went mechanically to his pocket—and paused. And then his heart went to his throat. He became all at once painfully conscious of the fact that the silver half-dollar represented every cent that stood between himself and starvation. A trick like the one confronting him was, in very truth, strikingly suggestive of Uncle Seth's mean and parsimonious habits; and he was sensible of the malice, whether intentional or not, that had prompted the consignment of such a bulky package to the mail with only the toll of a two-cent stamp to insure its conveyance, leaving it to his depressed "sinking" fund to supply the difference. Forty-eight cents!

It was very much like buying a pig in a poke, and hesitation was only a natural prompting of caution. The type-written address left no room for doubt but that the package was intended for him. "Scott R. Truesdell," he read, "General Delivery, City."

So, then, it was a drop-letter. And, excepting his unfortunate landlady, he didn't know a soul in New York! There was no return address, nothing on the outside to give an inkling of either the sender or the envelope's contents.

Still, he argued, those contents could not be utterly worthless; they might, indeed, be of inestimable value. Yet who in the wide world would send him—

The delivery clerk stirred him with a curt "Well?" while at his rear a fussy personage gave vent to his irritation by impatiently inquiring if he meant to stand there all day. Flushing at the sorry figure he was cutting, he quickly fished up the precious half-dollar, received his obolary offering of change and moved away from the window.

In a secluded corner of the corridor the young fellow tore off one end of the envelope and peered eagerly inside. At first his wondering brain could form no



"Fairly radiating excitement, she now stood in a strained attitude . . . listening, as if for sounds of pursuit"

concept of the contents; next instant, but still only in a measure prepared, he thrust two trembling fingers inside and drew forth a crisp new one-thousand-dollar bank-note.

#### Chapter II.

YOUNG Mr. Scott Truesdell was paralyzed, stricken dumb, and blinded and deafened to the rest of the world which surged and roared all about him.

Apparently the envelope was stuffed full with counterparts of the note which was speedily hypnotizing him; and doubtless he would have confirmed this startling assumption then and there, had he not been brought to an abrupt realization of his surroundings and of the inappropriateness of displaying one-thousand-dollar bank-notes so recklessly in a place like that of the post-office corridor. It was a feminine gasp of amazement that roused him.

"Oh!" He turned his dull gaze from the bank-note in one hand and the overflowing envelope in the other to a strikingly pretty girl who was staring round-eyed at both.

Her amazement was scarcely less pronounced than his own, though when he came to think over the episode afterward, he could not in the least conceive why it should have mattered to her at all. For a space her look remained glued to the bank-note and then, in an awed, half-terrified manner, it fluttered to his face.

In another moment, before the bewildered young man had time to adjust himself to such extraordinary conduct, her countenance turned a rosy red, she uttered another stifled "Oh!" then whisked down the stone steps to the street and was almost instantly swallowed up by the hurrying throng of pedestrians.

"Now, what do you know about that!" he muttered, completely nonplussed.

The pretty girl's unaccountable actions, however, at least served to bring him to his senses. He observed that he was the target for more than one pair of curious, inquiring eyes; so, hastily thrusting the one-thousand-dollar bank-note into one pocket, he stowed the precious envelope safely in another and hastened away from the neighborhood.

His destination was an obscure little restaurant that he knew of, where he hoped that he might be permitted to examine the envelope's contents at leisure and without further interruption.

Singularly enough, his thoughts were now less occupied by his amazing and unexplained stroke of fortune than by the image of the girl in the post-office, which manifested rather a persistent tendency to remain with him.

He recalled that, besides being unusually pretty, she had been modishly attired; not that he was more observant in such matters than the general run of men, but she bore that unmistakable stamp of breeding and refinement which impresses even the dullest and least sophisticated of minds; a circumstance which made her conduct at sight of the bank-note all the more mystifying and inexplicable.

But strangest of all, he was aware of a feeling of familiarity, now that he contemplated in his mind the manner in which the gray eyes had met his; a feeling that at some time, somewhere, he had known her, or, at least, that he had met her before in some unusual situation which should make him remember her now.

But such a fancy was absurd—preposterous—unless, indeed, it had occurred in a former existence. Surely, he had never before been confronted by those thoroughly womanly eyes. Sorry little Colton which, save for his four years at college, had defined his own horizon until seventeen days ago, had never been able to boast of a creature one half so exquisite as the brown-haired, gray-eyed little beauty who had evinced such a curious interest in his affairs.

He dismissed the idea, therefore, and reverted once more to the package in his inside vest pocket, only to be brought up with a turn by a sudden terrifying thought.

Suppose, after all, his spirits had been raised to the zenith of hope and happiness, only to be dashed to the nadir of despair? Suppose the notes were counterfeit? Horrors!

Truesdell gulped down a lump in his throat, and with a shaking hand produced his handkerchief and mopped his beaded brow; he was becoming surer every minute that he would be a nervous wreck before the morning ended.

He sent a wild look coasting along the street, which in a moment was arrested by the gilt lettering on a bank window. He stared thoughtfully across the way. The institution had only just opened its doors for the business of the

day; few were coming and going across its threshold; and while he watched them it occurred to him that here lay the means of determining the genuineness of at least the note he had taken from the envelope. If one stood the test of an expert, doubtless all would. So, threading his way across the congested street, he strode resolutely up to the paying teller's window and laid the one-thousand-dollar note on the counter.

"Will you please break that for me?" He proffered the request with a thumping heart, but with outward calm, and steadily watched the face of the man behind the ornamental brass grill. "A five-hundred—the rest in twenties and tens."

The teller was a trifle startled. He picked up the note, shot a keen glance at the seemingly unruffled young man, then scrutinized the paper money intently.

"Pardon me," he said presently, smiling at Truesdell, "people don't come in here every hour of the day and hurl a thousand-dollar bill under my nose with no more concern than if it were a five-spot. It's a new note, you see; somebody may have—er—taken an advantage of you."

"It would be dead easy," returned the young man, scarcely able to contain himself. "I confess I'm not so familiar with them as I'd like to be. But has anybody?"

"I don't think so. I can't afford to take chances, though; I would like to have the opinion of one of my colleagues."

"Very well." And as another idea occurred to him, he grinned feebly and added:

"You had better decide that it's good money, for if nothing goes amiss—in the next hour or so—I shall want to deposit a few just like that one."

It was just as well to provide a safe repository for the treasure which he hoped a further inspection of the bulky envelope would disclose.

Truesdell was on tenter-hooks during the teller's absence; but in two or three minutes, which were like so many hours to the anxious young fellow, he was back again and, much to Truesdell's joy and relief, began counting out the change without further demur.

The one thousand dollars in its new form made quite a thick roll; and while the young man disposed of it about his person, the teller affably expressed a hope that his enterprise might prove successful and added that the bank would appreciate his patronage.

Truesdell thanked him.

"Not at all," returned the teller. "I am glad to accommodate you, Mr.—"

Truesdell could not ignore this inviting pause, although some perverse impulse made him hesitate. With an awkward conviction that the teller's affability was rapidly changing to suspicion, he presently muttered his name and hastened away.

#### Chapter III.

IT WAS only a few minutes' walk from the bank to the small restaurant where Truesdell had partaken of most of his breakfasts during his sojourn in town. But on the present occasion he proceeded into the quiet interior with feelings vastly different from those of his previous entries, when his mind had usually been so harassed over his rapidly-diminishing capital that he would lose all appetite for even such meager fare as he ordered.

[CONTINUED ON PAGE 38]



# Sunday Reading

## A Helpful Easter Sermon

By Rev. Charles F. Weeden



**T**HANKS be to God which giveth us the victory! This is Paul's shout of triumph. It is the experience of a man who has gained the greatest victory in human life. Death is dead! Life has won! First it is a victory beyond the world.

We face a fact. There is a dark valley, a narrow gate. Drawn by ties of love, we are accustomed to visit the "White City." It tells of our inevitable destiny and the power of man's last great enemy. But we cannot stop there; there is too much light and would be a flood of light, but for our dullness. There always has been expectation. The lowest savage of Tasmania has a crude idea of existence after death. Some of the tribes place corn in the grave for the spirit's food, and spears for defense. The American Indian dreamed of his happy hunting grounds, and our Anglo-Saxon ancestors looked forward to their valhalla for hunting and fighting. The universal instinct for life hereafter is irrepressible and irresistible. It is the God-planted instinct in the soul, and the Creator never misleads.

A philosopher says, "The Creator keeps His word. What I have seen teaches me to trust the Creator for all I have not seen. The planting of a desire indicates that the gratification of that desire is in the constitution of the creature that feels it." Love does not cease at death. It is eternal. The object of love must live, too, or that love is disappointed. You remember the incident of the lad flying his kite so high that it disappeared in the clouds. A gentleman happening along asked him why he was holding that string in his hand. "Got a kite up there, sir." "Is that so? Why, how do you know? I don't see any kite." "Oh, it's up there, sir, all right. I can feel her tug." Those whom we have loved on earth have gone up yonder. There is a mist before our eyes. We do not see them, but we feel them pull at our hearts.

Ah—that it were best  
For one short hour to see  
The souls we loved, that they might tell us  
What and where they be.

So we are crying for more light and anxiously straining our eyes beyond the "Great Divide." There is a man ahead of us who has climbed the heights. God has lifted him. He utters a cry. There is none like it in all the world. Victory! Death is swallowed up. The last enemy is destroyed. Sin is beaten. Death's sting is gone. The grave is not man's goal, but the portal into life beyond. The winter is passed, the time of the singing of birds is come, He is risen! Let the glad bells peal it out. Let the flowers smile and nod their joy.

Let the choirs on earth and in heaven chant the anthems of life forever won. Be of good cheer, it is the eternal birthday of the soul.

What we want to know is this: How Paul won his victory. Had he been down into the dark grave? Had he seen the glory beyond and did he know? He tells us; "Victory through our Lord Jesus Christ." Not Paul, but Christ. Christ rose from the dead. That Roman-guarded sepulcher watched by famed soldiers, sealed by enemies—that tomb, found empty, proves it. Here, too, is the witness of the angel. "He is not here." It is the world's hope fulfilled, the great comfort, the satisfying of a man's soul and of the race instinct for life. Paul lived in a day when there were hundreds who testified that they had seen their Master alive from the dead. Said Doctor Arnold: "I know of no fact in the history of mankind which is proven by better and fuller evidence of every sort to the mind of a fair inquirer than the great sign which God has given us that Christ Jesus arose from the dead." Did He rise from the grave? The proof is here: To-day Christianity is a universal fact and Christ is a world-wide power. The resurrection is the foundation and pillar of modern civilization. To deny it is to discredit human intelligence and to lampoon the facts of history. One by one through the centuries men have caught up the shout of Paul: "Victory through our Lord Jesus Christ!" They have come to that certainty as the apostle did. How did they do it? If any man—that includes you, my friend—if any man will to do his will he shall know of the resurrection. Here is the secret: Keep His Word and you shall possess the assurance of heaven.

This victory beyond the world gives us

### Victory Over the World

The big world is a mighty power. It staggers the strongest man. It tramples and crushes him. How can he get the upper hand of it? You are encouraged by some success and it is right to have it. But success is walking by sight. There are larger victories to be won. Is success denied you? There is only one thing that will teach a man about this—to take any and every defeat and reach up for something higher, above the world. This is the victory, even your faith. May I recommend to the hosts of FARM AND FIRESIDE readers a book called "When It Was Dark." It is the story of a great conspiracy and portrays the crash of civilized society if belief in the resurrection of Christ were destroyed. Ian Maclaren

said that faith was a "sixth sense." It is the proper sense to understand the unseen world. You cannot taste a thought or hear a picture. We must have our grasp upon the future by faith. When you think you have some strong power to stand by you and put you on "easy street" for the rest of your life, along comes some stronger force that will thrust you "down and out." One force only cannot be beaten—faith, faith in a leader who has already overcome the world and the grave, who is the conqueror, yesterday, to-day and forever!

Where are the leaders of the centuries? Augustine, Anselm, Aquinas, Edwards, Bushnell, Park? They are gone. But Christ still leads! He is always going on before. The Teacher of teachers and Lord of all generations and nations. That is the Man you want to nail your faith to. To lay hold of Christ, not with your fingertips, but with the whole strength of your hand and grip of your soul. Who is the Master of the great men of the world? Let us get a bit out of the ruts of the present, away from our provincial limitations, above our theological ditches and take a broad look down the prairies of the centuries. Easter is a mountain-peak. Who looms up as the giant of the ages? Who is Paul's Master and Luther's and Melancthon's and Gladstone's and Moody's and Drummond's and Chapman's? Who masters them all? We begin to take in the vision. On the mountain-top between Chili and Peru stands a colossal statue of the Man of Nazareth as a sign of peace and goodwill. Go back from Christ of the Andes and it always leads to the Christ of Calvary and the empty tomb of Joseph of Arimathea. Read Christ every day. Make Him your comrade and He will create all things new for you just as He did for Paul. No power on earth can beat you when you have had experience with Christ. Hold to the faith and you shall have the strength of victory.

Finally, victory beyond the world, over the world, comes right down to meaning

### Victory in the World

Easter Day means something new. It is not a skirmish here and there. It is a fresh battle in a long campaign. "Some people are dead and do not know it." How long since we have won a manly victory? Are we spreading our faith, inspiring our neighbor by it? Are we witnessing for Christ? That is what keeps a Christian alive. Have we a mind and heart for service and usefulness? Are we eager to "pluck a thorn and plant a flower?" That is what makes a life and makes it worth living.

Easter is not a single display of beautiful flowers. It is not the garlands of a year ago that we bring into our churches and homes. But the rose, the lily, the fragrance of to-day. The Easter spirit is some fresh bud growing out of a narrow prejudice, rising out of a dead past, and blooming into the beauty of forgiveness, the loveliness of charity or ripening into the fruit of character. Or it is some longing bursting out of a sorrow-cleft heart and blooming into cañon flowers of gentleness and grace.

Victory is an exhilarating word. We all want it, the lad, the girl, the woman and the man. To win in our sports, if they are clean; to succeed in business, if it is honest; to stand well in school, in civic and social life, if free from cant and in the open; to raise the finest crop ever. But, really, only a few gain success in the world. Only one can win the Marathon. It is fine to win; to excel in planting and gathering into barns. Do not misunderstand me. It is commendable. But I want to say a word for the man who fails to capture the flag. It is victory to have struggled for it. The great blunder, the big cowardice is not to run your race. Not to be up and at it day after day. It is not so much, am I winning? But am I doing and fighting and serving? Never mind the handicap. Do you expect easy things in a world of sin?

Did you tackle the trouble that came your way  
With a resolute heart and cheerful?  
Or hide your face from the light of day  
With a craven soul and fearful?

\* \* \* \* \*

You are beaten to earth? Well, well, what's that?  
Come up with a smiling face.  
It's nothing against you to fall down flat  
But to lie there—that's disgrace.

Listen! Was Paul a success in Rome? Was Savonarola a pope? Did Cromwell succeed in Thread-needle Street? Was John Knox a King? Was the Man of Sorrows popular? Yet such as these have built nations and saved a race! The Christian struggles for a crown that does not fade. So it is not the laurel of the world's praise or the fact that the world throws him down. But

It's how did you fight—and why?

Easter is not fine music once a year. Go and catch the inspiration each Lord's Day. Easter is the clarion call of faith, courage, mastery, victory—every day in the year. Not as one that beateth the air, but I keep my body, every evil, under. Fight for that.



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## THEODORE ROOSEVELT'S

own account of his African trip—now appearing in

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# Money-Making for Women

## My First Year's Work With Bees

By Sarah T. Lyon



This woman manages sixty hives of bees

desire to be the producer of luscious honey for our table outweighed all other considerations, and almost before I knew it I was the owner of a hive of bees.

By wearing a proper dress, gloves and veil, together with the use of a bee smoker, I soon learned to work among the bees during an entire season without once receiving a single sting. So no woman need be deterred from keeping bees through fear, provided the proper protective measures are adopted.

Fortunately, my first hive of bees were Italians. This race is remarkably gentle and they are much easier to handle than the black or hybrid bees.

During the years following the purchase of my first hive I have tried various races of bees, such as the Carniolans, the Caucasians, the Banats, Cyprians and Blacks, but like other experienced bee-keepers, I have found that the Italian bee is superior to any other.

My first hive of bees was of the old-fashioned box type and was bought from an old man away back in the country for one dollar and a half. He packed them securely so that I could carry them home in a wagon without the bees escaping.

The packing consisted of turning the old box hive upside down, late in the afternoon after all the field bees had returned, and then an ordinary feed-sack was pulled down over the hive and tied.

As the weather was cool (it being the early part of April), there was no danger of the bees smothering, and after a ride of about five miles the sack was removed and the hive placed on a board for a stand.

During the removal of the sack and the placing of the hive on its stand my hands and face were fully protected by gloves and veil, and the entire operation was carried out and I did not receive a sting.

While the old box hive was more or less picturesque as a relic of the past, yet it in nowise suited me, for I knew that the only way to get the honey was to resort to the barbarous method of "brimstoning" and killing the bees, a thing that could be entirely avoided by the adoption of a modern hive.

The modern hive has many advantages, among them being the fact that we can produce our surplus comb-honey in nice little wooden sections, each holding a pound, with combs as white as snow. Whereas in cutting down the combs from the old box hives the combs generally become travel-stained and clogged with bee-bread and brood.

Another thing about a modern hive is that the brood nest can be examined, and the wooden frames, in which the bees have built their combs, can be lifted out without any breakage whatever. Surely this is a good point in their favor.

So after these considerations I purchased a complete hive from a bee-keeper's supply-house and I intended to transfer the bees at the height of the fruit bloom.

Just a day or two before I intended to make the transfer the hive cast a swarm and it was a sight to behold. The bees just came tumbling out of the hive like mad, and the air for miles seemed filled with them.

After circling about for a few minutes, they began to cluster on a branch of a peach-tree, and were soon hanging there in a great bunch, which is characteristic of all swarms.

As soon as the swarm began to emerge from the old hive I hastened to put on my veil and gloves, and

SOONER than I had anticipated, my ambition to keep a few hives of bees was gratified.

We women all have our day dreams and seasons of castle-building, much of which comes to naught. I was no exception to the rule, and built many a castle with the bees.

At last we moved to the country, and in addition to a choice strawberry-bed and five flocks of White Wyandotte fowls, I was determined to take a flyer in bees, and from that small beginning, with one hive, I am now the proud possessor of an apiary numbering about one hundred colonies.

In common with most women I had more or less of a fear of bees, as an occasional sting from them during childhood had left a lasting impression. But my

the new hive, with its frames all filled with sheets of foundation wax, was brought from the house and placed on a stand beside the old hive.

When the swarm in the tree had quieted down, I simply cut off the branch, which was rather small, and carried it, bees and all, to the new hive. With a quick shake I threw the bees in front of its entrance. In less time than it takes to tell, the swarm began to enter the new hive, marching in like platoons of soldiers, and in half an hour practically every bee had entered the hive.

About a week after the swarm had been hived I determined to open the hive and see how they were making out, so, filling the smoker with wood shavings and starting a fire, I puffed a little smoke in at the hive entrance to subdue them. When they had quieted down, I pried off the hive lid, and to say I was surprised is putting it very mildly.

During that week the bees had filled every frame with combs of snowy whiteness, and their handsome golden color against the white comb was indeed a beautiful picture. There was her Majesty, the Queen, busily engaged in laying her eggs in the cells with her ever-present retinue of attendants.

Finding that everything was all right, I placed on top of the hive a super case containing thirty-two little wooden boxes, with little wax starters in them, just as they came from the manufacturers. On top of this I placed the lid. Then I left them.

In about ten days I again lifted the lid from the super case and peeped in, and, believe me, nearly every one of the thirty-two little boxes were filled with honey-combs, full of golden sweetness. I felt that my venture was successful.

Another super was added, and in the course of the season two others were added. When the honey was taken off at the close of September, that hive had produced just one hundred and sixteen pounds of beautiful comb-honey.

There was no "brimstoning" of the bees to get their honey, and what the bees had stored in the main body of the hive was left for them to winter on, about twenty-five pounds being necessary. When the latter part of October had arrived, the hive was prepared for winter.

This preparation consisted of placing a feed-sack filled with chaff in one empty super, right over the brood frames, and over the super was placed the lid. In some sections of the country, where the winters are severe, special packing-cases are desirable and are listed in the catalogues of bee suppliers. However, since my home is in southern New Jersey, the above was ample.

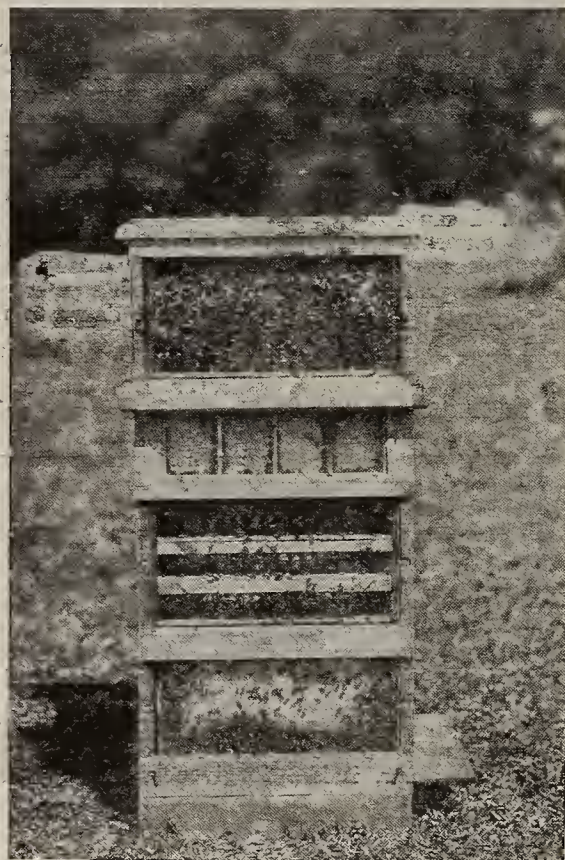
The old hive continued to do well after it had cast a swarm, and built up to a strong swarm by fall. It was carried over the winter, as was the swarm in the new hive, and when the winter was past, great was my joy to find that both of the hives were alive, and from those two hives the following season I began a system of increase, so that at the end of the second season the number of my hives was considerably larger.

I found that during the dry periods when the bees were breeding that it was necessary to give them water. A shallow vessel may be placed nearby and frequently filled. As a precaution against the danger of drowning some of the bees, a thin piece of wood perforated with holes should be placed so as to float on the surface, covering every part of it. The holes will be so many little wells, from which the bees can draw their supplies without danger of their falling into the water.

There can be no more pleasant occupation for women than bee-keeping. However, I would not advise any woman to go into this branch of work with the idea of becoming vastly wealthy. The profits are large, of course, and there is little chance of failure if the bees are properly cared for. The only handicap likely is the breaking out of the foul-brood. Naturally this will wipe out the profits.

Some farmers have the mistaken idea that it requires skill to keep bees. What it does require is a certain amount of work at the right time. There is not nearly so much work connected with bee-keeping as there is with poultry-raising. The bees and necessary equipment cost very little, so the work should not deter women from entering this interesting field of industry.

In a way, the honey crop is pure gain, for it is not necessary to have a pasture or special flower-garden for the bees. They are well suited with any farming, gardening, wild brush or fruit-raising land. One man in Illinois has made bee-keeping a profitable occupation. From four hives, four hundred pounds of honey were yielded the first season, and in four years the crop was increased to twenty-seven hundred pounds.



An observation hive is an aid to studying bees



In winter the bees are most comfortable, because they are properly packed



# The Boy Who Saw

By Clarence Hawkes



I AM going to tell you the brief story of the boy who saw, and let you draw your own lesson from his experiences.

This boy was a farm boy, and I consider it the very best heritage in the world to be born on a farm or at least in the country. If one is born in the country, he usually starts right, for the sweet air and the sunshine and bird song cannot help but get into his nature and sweeten and purify it.

This boy was early introduced to the hoe and the shovel, the saw and the ax, and while he did not like these implements, but rather considered them instruments of torture, yet I am sure that he learned the first lessons of patience and real joy in labor from handling these despised weapons of toil.

But the greatest education, and the greatest benefit which our farm boy derived from his farm life, he got from living out of doors, with the free blue sky above him and the sweet green-sward under his feet.

Each morning, just as old Sol was peeping over the eastern hills, it was the lot of our farm boy to drive the cows to pasture. How fresh and sweet the air was, and what a joy it was to scuff in the dew-laden grass and breathe in the delicious fragrance of the flowers, which gave up their very sweetest perfume at this bewitching hour. Then the world of birds and squirrels and all the manifold forms of busy life in the country were bestirring themselves. The birds and squirrels were getting breakfast, and all the crawling, creeping things in the grass were wriggling about, each upon important business bent. It was the joy and delight of this boy to see all these things and not only to see them, but to understand them as well, which is more.

Many people see things in a dreamy, half-hearted way, but few remember them or so connect them in their thought that they get their true meaning. But this boy not only saw the manifold life in the fields and woods about him, but understood the intimate life of bird and squirrel, bee and butterfly. You must not imagine, either, that this understanding came to him without patience and painstaking, for no knowledge that we possess is gained without patience. Patiently and with sympathy, which is really the golden key that unlocks many of Nature's secrets, this boy sought to know fields and woods and all their sweet, shy little inhabitants.

In the spring when he drove the horse to cultivate he noted the birds that followed in his wake picking up worms. In the summer when he ran the horse-rake or the tedder he noticed the wild flowers and the different kinds of grasses, the berries and the insects. In the autumn when he went to the forest for nuts he noted how the squirrels were laying up their winter's store. By the stream he saw that the muskrat had built himself a house against the coming of winter.

In the winter-time our farm boy went with the logging team into the deep woods and saw all the manifold life of the shy little wood folks. All about in the new snow was plainly written the story of their life. Sometimes it was a grim tragedy that was read and sometimes it was a frolic. There were large tracks and small. Here it was the rabbit who had been playing tag in the moonlight, and there it was a tiny wood mouse who had come out to see how the winter passed.

Nor were these things, which came as a part of farm work, all, for the boy soon developed a passion for the ways of Nature, and with an old woodsman, who knew all her secrets, he made frequent excursions into the fastnesses of Nature.

Finally there came a day in which all this was changed. When, for the keen-eyed farm boy, the sun in the sky went out forever, and the moon and the stars for him no longer shone. It was the accidental discharge of a gun in the hands of a companion that closed his eyes to the glad green world which he loved.

In the darkened corner of his room he sat for many months trying to make out what had happened to him. The world had been so bright before, and now it was so hollow and empty.

Only the other day there was the broad expanse of the green fields and meadows, the amphitheater of hills and beyond them the deep cerulean blue of the sky. Now, instead of this wonderland of beauty, there was blank, meaningless darkness by day and darkness by night, week in and week out.

Never again would the farm boy drive the cows to pasture or scuff in the dew-laden grass. Never again would he go with the logging team into the deep woods. Long the child pondered on these things, as he sat with bowed head.

What did it all mean? Why, of all the world, had he been singled out to sit in gloom while the rest of the world went laughing carelessly by? Why should the sun shine and soft clouds fleck the sky and fairy fingers paint the rose, and all this color and brightness be as naught to him?

Long in his dark corner the boy pondered and at last the light came to him. All these things, the changing seasons, the green fields and the forest, the flash of bright wings in the morning sunlight, the blush of the rose and the tinting of the lily he had still, in his mind, as vivid indelible pictures that time could never dim. In some inexplicable way they had come to be a part of him, as much a part of him as his hands or feet, and although time might powder his hair with white and wrinkle his brow, it could never dim these pictures.

Then it was made plain to the boy why he had so lived in the out-of-door world when he could see and enjoy it.

It had been the forethought of a wise Providence which had caused him to store up treasures in his mind against the hour of his need.

After this the boy thought much of the thing that had happened to him. Those about him, with eyes, were so unmindful of the beauties all about them. They came and went as though blind to all the deep meaning of Nature and the natural world. They had eyes for external things, yet they saw not; they had ears, yet they heard not the wonderful symphony of field and forest. Then the boy conceived a very daring plan, one which made all his friends smile when he first broached it to them. It was his mission to make these people see, who had eyes, but saw not.

It was ten years ago that the blind naturalist set himself about this task. To-day he is the author of a dozen Nature books, by means of which children young and old delight to behold the wonders and beauties of Nature. From being a helpless, groping child, he has come to show others the way.

Now here is the thought that I would leave with you boys and girls who live on a farm or in the country, who think your life mean or cramped. There is no better fortune that can befall one than to be born in the country. Your only misfortune will be if you fail to imbibe the truth, beauty, wonder and mystery of the green world about you.

Cultivate a habit of seeing, and seeing correctly, of seeing sympathetically and of seeing all there is to see.

Then when your dark hour comes you will have a world all your own to which you can retire for help and strength, even the strength of the hills.

## You Can Avoid High Retail Prices BY PURCHASING LARKIN FAMILY SUPPLIES



Teas, Coffee, Spices, Extracts, Baking Powder, Laundry and Toilet Soaps and other common necessities,—articles that

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OUT OF WHAT YOU SAVE**

**By LARKIN**

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Here is the explanation: when you buy direct from us, the manufacturers, you save and are given in a Premium, the profits of the wholesaler, sales-agent and retailer which are included in the prices you pay at a retail-store.

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If you don't care for Premiums, you can have your savings in extra Products. For example, for \$10.00 you can have \$10.00 worth of Larkin Products and any \$10.00 Premium in our Catalog, or without the Premium, \$20.00 worth of Products.

By the latter offer, our Products cost but one-half list prices—a bar of Laundry Soap listed at 5 cents, costs but 2½ cents; a pound of coffee listed at 35 cents, costs but 17½ cents; the reduction is proportionate on every other Larkin Product.

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We will ship you \$10.00 worth of Larkin Products, of your selection, and any \$10.00 Premium in our Catalog, or \$20.00 worth of Products without the Premium, on thirty days' trial. You then pay us \$10.00, if satisfied; if not, we will remove the goods at our expense, refund freight-charges and charge you nothing for a reasonable amount of the Products used in trial.

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## The Most Successful Plant-Sprayer

THIS Sprayer works like an old-fashioned lemon-squeezer. It consists of a rubber ball, and works like a pair of scissors.

You fill the bulb with tobacco water, and you can spray under the leaves and on top of them, and kill insects and remove the dust. It makes plants bloom tenfold and keeps all plants healthy.

With each sprayer we will send you a cake of tobacco soap for making suds.

It can be used for sprinkling the family wash and for many other purposes. It means plenty of flowers. Tobacco is very healthy for all plants.

We will send you this valuable Lenox Sprayer, if you will get only four friends each to give you 25 cents for a special 8-month subscription to FARM AND FIRESIDE. You can easily get these subscriptions in a short time. Your friends will be glad to get the biggest, best and handsomest farm and family paper for 8 months for only 25 cents. Tell them that this is a special reduced-price subscription that you only can offer them. The regular price of an 8-month subscription is 35 cents.

When you secure the four subscriptions send the \$1.00 to us and we will at once send you the Lenox Sprayer, together with a large cake of tobacco soap.

**FARM AND FIRESIDE, Springfield, Ohio**



## Our New Double Wing Drop Head Cabinet

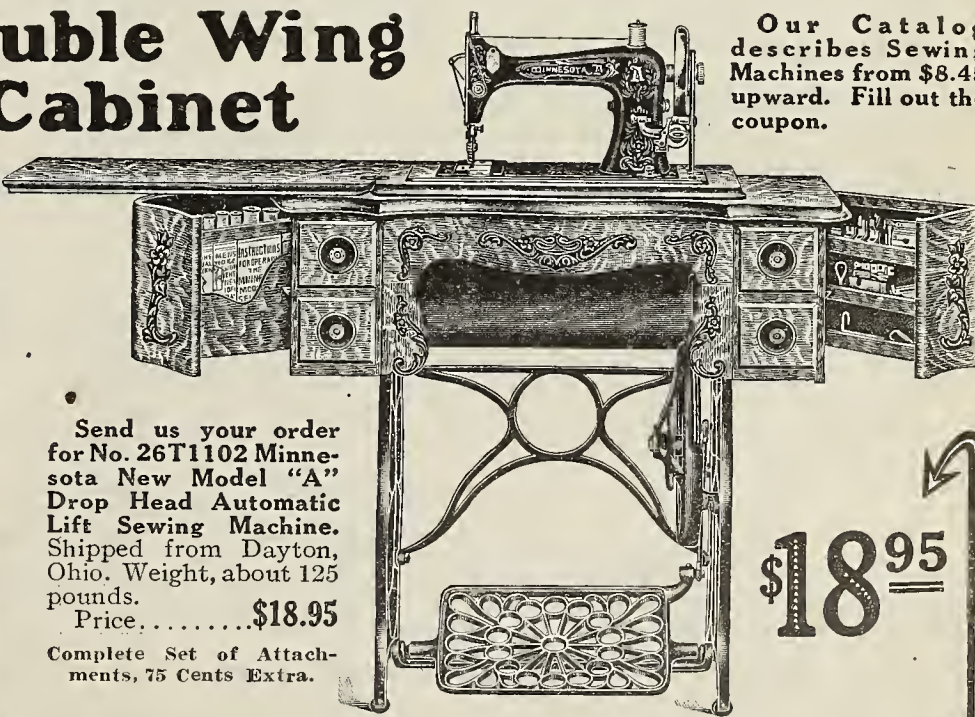
**THIS DOUBLE WING DROP HEAD CABINET** is an entirely new patented feature, made exclusively for our Minnesota Model "A" Sewing Machines. A place for everything you use—the most compact and attractive of all sewing machine cabinets. Right wing velvet lined to protect tools and attachments. Left wing partitioned to hold thread, patterns, fashion books, etc. When closed these wings lock automatically over the four full size drawers. No key required.

The Minnesota Model "A" is a machine with the WORKS. The head is as perfect a piece of mechanism as a watch and is guaranteed by us for twenty years. It is the same size as all high grade family sewing machines for which dealers and agents ask from \$40.00 to \$60.00.

**THE WOODWORK OF ALL OUR VARIOUS STYLES OF MODEL "A" SEWING MACHINES**, as well as the style shown here, is of the very best grade of quarter sawed oak throughout. The stand of the Minnesota Model "A" is not only the best looking stand on the market, but is the easiest to keep clean and the lightest running.

**OUR SPECIAL SEWING MACHINE CATALOG** is a book you must have if you contemplate buying a sewing machine. It shows all our various models, many of them in colors just as they appear; illustrates the various parts, explains fully our twenty-year guarantee, our three months' trial contract, and describes the uses of all the special attachments. Fill out this coupon carefully with your name and address. The very day we receive it we will send you a free copy of our special Sewing Machine Catalog.

**Sears, Roebuck and Co.**  
Chicago - - - Illinois



Send us your order for No. 26T1102 Minnesota New Model "A" Drop Head Automatic Lift Sewing Machine. Shipped from Dayton, Ohio. Weight, about 125 pounds.  
Price, ..... \$18.95

Complete Set of Attachments, 75 Cents Extra.

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# For Your Spring Hat

## New Ideas for Effective Trimmings

By Emma L. H. Rowe

WITH the approach of spring our thoughts naturally turn to the necessity of a spring hat, one entirely new or last season's retrimmed.

The three styles of trimming here shown have been selected not only because they are new and attractive, but because they can be adapted alike to the trimming of last year's hats and the new shapes of this season.

The charming trimming for a child's hat is suitable for a very small child or for a half-grown girl. For a small child the ribbon should be not more than three inches wide, which will make a small, dainty rosette and shirred band. For an older girl the ribbon should be about five or six inches wide, which will make a rosette large, graceful and modish.

If made of five-inch ribbon, three yards will be required; if made of three-inch ribbon, about two or two and one quarter yards will be sufficient. With a needle and generous length of thread run fine gathers along the upper edge of the ribbon three eighths of an inch from the edge. One inch below this gathering line run another row of fine gathers.

Next pin or tack one end of the ribbon to the left side of the crown of the hat, coax the gathers or shirrings into uniform fullness (not too full) around the crown and pin or tack into place at intervals. This shirred band should be placed rather high around the crown, so that the ribbon will flare gracefully at the bottom.

Do not cut the ribbon, but with the remaining length pull the top gathering thread quite tight, until the gathers or puckers meet in a circle; fasten off thread. Pull the second gathering thread not quite so tight, to form a graceful outer shirring; fasten off thread. Slip raw edge of ribbon under the folds and tack.

The center of the shirred rosette should be on a line with the rows of shirring around the crown.

The tailored bow and band of ribbon makes a most desirable and inexpensive trimming for the hat of a young maid or matron.

Three and one half yards of five-inch ribbon will be required. Make a flat bow, folding the ribbon back and forth to form loops on each side of an imaginary center. The three loops toward the front of the hat should, when formed, measure six, five and four inches from the center; the four loops toward the back should measure seven, six and one half, five and one half, and five inches. Cut the ribbon. Make a plait through the long center of the loops.

Arrange a nine-inch length of ribbon up and down over the short center of the bow, first making a half-inch plait in it. It should measure four inches across either way, in reality forming a square.

Another nine-inch piece should be reserved for the cross-fold which bands the ribbon band.

In the thirty-inch length remaining for the band of the hat make one long fold. At the center of the strip arrange the nine-inch length, crossways, forming a square similar to the one which bands the bow.

The bow should be placed on the left side of the hat and the band caught loosely around the turban or mushroom shape about one inch from the lower edge.

It may also be worn with the bow directly across the front of the hat.

The draped bow and coiled band shown is of velvet and makes a complete trimming for a hat. It is suitable for the hat with a crown, for the mushroom and

the turban shapes of this and last season. One yard of velvet (or silk) on the bias will be required.

Cut into four strips of equal width, parallel with the bias. Sew together at the bias ends, being sure that the pile of the velvet runs all one way. This is easily ascertained by smoothing the velvet with the palm of the hand. The velvet is rough one way and smooth the other.

Reserve enough for the coiled band which spans the hat (but do not cut) and use the remaining length for the draped bow. Turn under the bias ends and raw edges of the entire strip one

quarter inch and stitch by machine. This will increase the tailored effect.

Nine inches from one long point plait the velvet closely and hold between the thumb and forefinger of the right hand; tack into place.

In making this bow the velvet should always face the

maker. This effect is obtained by bringing the velvet circularly around in forming the loops, instead of doubling it as with other bows. Bring the velvet around to the left in a large coil, this will require another three quarters of a yard; make three plaits; tack alongside the last tacking. This completes the outside loop toward the front of the hat.

Bring the velvet up and around, and plait together sixteen inches farther on; tack alongside the last tacking. This forms the left or rear loop.

To form the large center knot, bring the velvet over and completely around the center of the bow and pull the end through loosely.

Next, carry the long end under to the center of the front loop (the large loop), follow its center curves and finally slip it back through the center knot, where it should droop gracefully beside the first end.

This trimming should be placed on the left side, slightly to the back of the hat, and the coiled band should rest closely but very

lightly around the body of the hat. When last summer's left-over hats are brought forth to the glaring light of a new season, there is a hopelessness and forlornness about their appearance that is discouraging to the woman who must make them "do" for another season.

Yet there is scarcely a hat but that has possibilities, for many times it can be freshened to look like new.

In the first place, all trimmings must be removed, also the lining.

The straw shape can then be thoroughly brushed and cleaned. Dark chip, satin and dull straws should be dusted and cleaned with a piece of velvet, which removes closely-adhering particles as no amount of brushing will do. Light straw can often be cleaned successfully with corn-meal well rubbed in and brushed out, and the process repeated one or more times. Straw can also be cleaned with one of the bleaches sold at an apothecary's for the purpose. A five-per-cent solution of citric acid applied with a small sponge or soft brush is many times effective as a wash for straw.

After applying the citric acid, the hat should be well rinsed in water and dried in the sun. Be careful not to pull the hat out of shape during the process and to see that it hangs or rests evenly while drying.

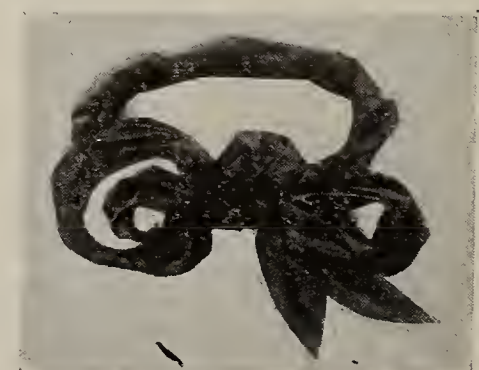
Sprays of flowers which seem hopeless may often be coaxed back into shapeliness by patient handling, leaf by leaf, flower by flower. Where faded or soiled, they can be "touched up" or tinted with cheap water-colors into a charming freshness of color. Try this suggestion before throwing out old flowers and be convinced of its value.



Smart Ribbon Tailored Bow



Moire Ribbon Trimming for Child's Hat



This Draped Bow a Complete Hat Trimming



## These Ten Post-Cards Given to You

THESE ten post-cards are the famous Flower and Verse set. They are printed in gold and fourteen colors and will please you tremendously. You can get them **without cost**.

Each card contains a favorite flower printed in the exact natural colors, every petal outlined in gold. This is the newest way of printing post-cards and makes a very handsome and rich-looking effect. It is the most expensive way of making them up, but we have succeeded in getting the most perfect and beautiful post-cards ever made.

In addition to the beautiful flowers—so real that you can almost smell their fragrance, each card contains a well-known saying of some famous character, printed in gold letters. These are the newest and most fashionable post-cards. Every one who gets them will be delighted beyond measure. They are simply wonderful.

### How to Get Them

We will send you these ten beautiful post-cards without cost if you will send us ten cents (silver or stamps) for a three-month trial subscription to Farm and Fireside. Our only requirement is that the subscription must be for some one who is not now a regular subscriber. Get a friend to give you ten cents for a new three-month trial subscription, or send Farm and Fireside to a friend for three months. This is a great offer from the greatest farm paper.

### Don't Fail to Get Them

Any one who now subscribes to FARM AND FIRESIDE can get these ten wonderful Flower post-cards by sending a three-month subscription for some one who does not now take it. New Readers can get these post-cards and FARM AND FIRESIDE for three months by sending ten cents (silver or stamps) with their name and address.

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We make this offer to introduce FARM AND FIRESIDE to new readers. If you have not subscribed, this is a good chance to try FARM AND FIRESIDE for three months. We are satisfied that you will like it—that you will want to keep taking it. That is why we make this great offer to get a new reader to try it. Just think—twice a month for three months for only 5 two-cent stamps.

We ask our old subscribers to notice that they can get a set for every new three-month subscriber at ten cents each they send, if they pin this coupon to their letter. Send for them to-day.

**FARM AND FIRESIDE**  
Springfield, Ohio

FARM AND FIRESIDE,  
Springfield, Ohio

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Please send me the Flower and Verse Post-Card Set, postage prepaid, without cost to me.  
Enter as a new subscriber for three months the name below mine, for which I inclose ten cents (silver or stamps).

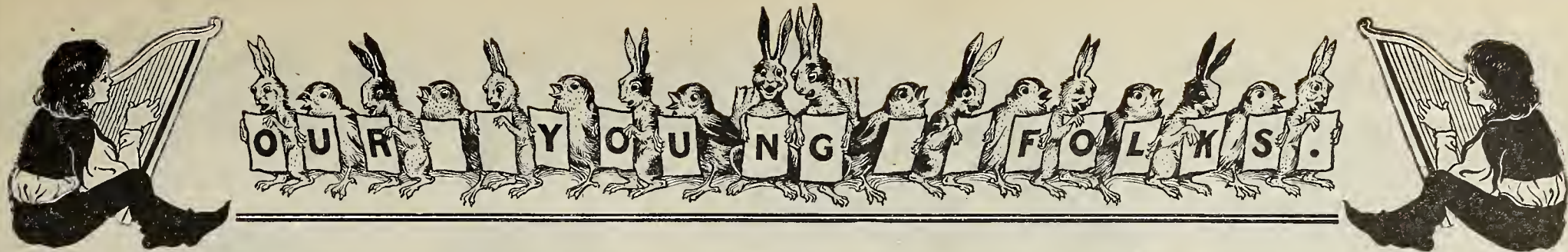
Name .....

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## Good Work by Our Boys and Girls

### Orchard Fairies

**M**ONGST the leaves of that apple-tree  
A whisp'ring, rustling sound is heard.

Is it the buzz of a bumble-bee  
Or is it the movement of a bird?  
Mother says 'tis the wind's soft sigh,  
But I am sure the fairies are nigh.

Rising and falling with the breeze,  
I see a bit of color gay;  
Now it is floating above the trees,  
Now on a flower it does airily sway.  
Mother says 'tis a butterfly bright,  
But I am sure 'tis a fairy sprite.



By Beulah Tull, Age Fourteen

Oh, why are grown-up folks so blind!  
They ne'er a fairy can hear nor see!  
For orchard sights and sounds they say  
Are caused by wind or bird or bee.  
But you and I, we always know  
The orchard's the place the fairies go.  
BEULAH ELIZABETH AMIDON,  
Age Fourteen,  
Fargo, North-Dakota.

### April Showers

**P**RETTY little raindrops,  
Who has sent you here,  
To water pinks and buttercups  
And violets so dear.

Oh, yes, God has sent you  
To give us water to drink  
And to keep the plants from dying;  
'Tis good of Him, I think.  
MARY S. ALEXANDER, Age Thirteen,  
Chase City, Virginia.

### Anne's Bravery

**A**NNE was standing on the porch of her home one afternoon watching for her father to come home from the office. She was a little girl about ten or eleven years old. She had long black curls and soft brown eyes. Soon she saw her father coming and she rushed out to the gate to meet him.

"Oh, papa!" she cried, as he came up the steps, "guess what? A robber broke in Norman's house this morning while they were out. Wasn't he cheeky to break in when it was light?"

"Well, indeed, he was. But did the people get home before he got away, dear?"

"Yes, but he heard them coming and slipped away before they could catch him!"

That night Anne could not sleep for thinking about burglars. What if the same robber should break into their house? She knew her father kept money and valuable papers in the safe in the library, which was under her room. But after a long time she fell asleep.

Toward morning she awoke with a start. What was that noise down-stairs? She heard footsteps in the library. Anne's heart beat fast, and she sat up in bed and listened. With one bound she jumped out of bed, for little Anne was not afraid. She walked out to the stairs in her bare feet and crept softly down till she reached the bottom. She turned and walked toward the library. She tiptoed over and peeped in, and saw a man trying to open the safe! Anne then crept softly back up-stairs to her father's room.

"Papa, papa," she softly cried, "there's a burglar in our library!"

Before Anne knew it, her father had the burglar by the collar, and he held him while he telephoned and called up the police.

ERMA BRUTCHER, Age Thirteen,  
Brimfield, Illinois.



By Amy Miller, Age Thirteen,  
Chillicothe, Ohio



By Alfred Claus, Age Fifteen,  
Brooklyn, New York

### The Fairies' Ball

**I**T WAS a beautiful moonlight evening. The sky was clear and the stars twinkled and shone in the heavens.

This was an important evening in fairy-land. There was to be a big ball and all the dainty little fairies came dressed in gorgeous robes. Some were pink, some were green, and others were soft yellow and blue. The dainty fairies glided to a large green lawn that touched the waters of a glittering shining lake. Large white water-lily boats floated around in the water.

The fairies danced and frolicked to the music of a bee orchestra. The air was filled with fireflies that fluttered about over the shining water and in and out among the trees. The fairies danced and danced until midnight. Then the music gradually grew softer and softer, and by and by it ceased altogether. Then the happy little fairies made their way to the lake and stepped into their water-lily boats. A gentle breeze rustled the leaves of the trees and reached the lake. The lilies began to float up and down with their dainty passengers, the fairies drifted out of sight. When the children awoke in the morning, they exclaimed, "Oh, the fairies have been here. They have left diamonds hanging on the fruit in the orchard and the grass is full of them. Oh, dear kind fairies, come again!"

IONE M. REHM,  
Age Fourteen,  
Meriden,  
Connecticut.

### The Return of Spring

**T**HE fruit-trees are laden with blossoms,  
Their branches are bending low,  
Through the air their perfume is wafted  
By the soft breezes that blow.

At the foot of the trees grows the clover,  
And violets peep out of the grass,  
Each smiling a happy welcome  
And cheering us as we pass.

The birds are filled with the glory  
And joy of returning spring,  
They warble their carols of gladness,  
And peace and joy they bring.



By Beulah Tull, Age Fourteen

The sky is clear and cloudless,  
The sun smiles from above,  
And all is a beautiful symbol  
Of our heavenly Father's love.  
EMMA PETERSEN, Age Fourteen,  
Minden, Nebraska.

### In the Woods

**W**HEN I go walking in the woods  
And think of long ago,  
How lions used to roam about,  
I get afraid, you know.

And when I think of all these things  
I have to look around,  
To see there are no tigers by  
And that I'm safe and sound.

MAE RUGGLES, Age Eleven,  
Dallas, Pennsylvania.

Dora Blakesley, age eleven, Maple City, Kansas, would like to exchange post-cards with the cousins.

### Notice

**D**o you want  
to join Cousin  
in Sally's Club?

The club button costs but five cents and with it goes a letter telling the club's motto and how to become a loyal member. State age, as the club is only for boys and girls who are seventeen and under. Address Cousin Sally's Club, 11 East 24th Street, New York City.

## Cousin Sally's Easter Letter



"For, lo, the winter is past, the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land."—The Song of Solomon 2:11, 12.

**D**EAR BOYS AND GIRLS:—  
I have been sitting at my desk a long, long time thinking and thinking. And what do you suppose I've been thinking about? Did you say you had no idea? Ah, yes you have. Every one has the same thoughts at this time of year. Now try again—there, you have guessed correctly, for I was thinking of Easter and spring and flowers. They all go hand in hand, don't they, and if you love Easter as much as I do, then your heart is filled with joy, happiness, hopefulness and gladness. Oh, the joy of watching the trees put on their new spring gowns and watching mother earth deck herself out in her ever-beautiful robe of green and to see the flowers peeping out of the ground, filling the air with their perfume as their pretty heads nod and bob in the breezes, and the delight in listening to the little birds singing and twittering triumphantly as they flit from tree-top to tree-top. They seem to know that Easter has come! Spring has returned—to put new life, new hope, in everything—in the grass, in the trees, in the birds, in you, in me, in every one! Come, open your hearts and let spring in. Every one who loves spring has Easter in his heart.

In the spring new hopes, new ambitions, new plans that have been lying fallow during the cold days, like little seeds in the quiet earth, take form, and we must find ourselves full of life and youth and action, for all sorts of beautiful deeds and thoughts, not only for ourselves, but for those about us whom we love.

Talking of little seeds lying in the quiet earth makes us think of our garden, doesn't it? The garden is always first in our thoughts as soon as Jack Frost goes whisking off on his yearly vacation. I do hope all of my little friends will try to have a garden of their own this spring.

Don't make the mistake of having too large a garden. It is far better to have a small flower-bed that is well kept and weeded than to have a large one that is sadly neglected. The first thing to do in the garden is to spade the beds. Dig up the soil and let it remain where it has been tossed for about three days. This will expose it to the sun and air and possible rain-falls, so that the soil will be very easy to break up and pulverize. Work it until it becomes fine and rich. This will enable the seedling plants to come up very easily. A little manure mixed with the earth will make it rich and fertile.

In sowing your seeds do not plant

them haphazard, or you will regret it later. Some seeds are so fine that if they are planted too deep in the soil they will not come up. Portulaca and petunia seeds should merely be sprinkled on the soil and then pressed down firmly with a smooth board. Larger seed should be covered lightly with finely-sifted soil and pressed down firmly. Another thing to be carefully considered is the color-scheme of your garden. Plant in it only the flowers that harmonize with each other in color. Large-growing plants should always be placed in the back, with the smaller ones in front. This will give the garden a sloping effect and I know you will be pleased with the result. Sunflowers, dahlias and morning-glories make excellent backgrounds and are very hardy plants, and nasturtiums, candy-tuft and sweet alyssum are extremely pretty for borders.

About the middle of April is a good time to plant zinnias. They bloom when they are very small and will stand considerable frost. Then there is phlox, which is seen in most every garden. Immediately after it blooms, break off the heads of the phlox and a second crop of flowers will appear in three weeks. The gladiolus is very easy to manage. It should be planted about four or five inches deep in good

rich soil. Be sure to keep the weeds from crowding it.

Of course, every boy and girl who has a garden will want to grow sweet peas. The seeds should be sown in spring as soon as the frost is out of the ground. Make a trench about one foot deep and one foot wide. Put a layer of manure in the bottom of it and over it put two inches of soil. Sow seeds about two inches apart and then cover them with two inches of soil. Press the dirt down firmly. As the plants grow, fill up the trench, piling the earth around the plants until the roots are very deep. Train the sweet peas up on a trellis which may be made of posts covered with wire netting. Be sure to weed your garden as often as necessary and keep the soil around the plants well raked and broken up. Water the flowers after sun-down. If you will but make up your mind to give your flowers the proper attention, your garden can't help but be a success. There can be no better pastime than working among the flowers and watching them grow from day to day. You boys and girls who live in the beautiful country have much to be thankful for. So never, never envy your city friends, because many times they are envying you the lovely green fields, that little stream, that orchard and those delightful little rambles through the woods.

If you have a garden, write and tell me all about it. If it is a vegetable-garden, then write and tell me just what you are growing and how you care for the plants.

With heartiest Easter greetings to you all, dear little cousins, I am, as always,  
Ever faithfully, COUSIN SALLY.



By C. Earl Leftwich, Age Thirteen,  
Pike View, Colorado







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## Stock Up with Fresh Soda Crackers

Instead of getting a large package of *loose* soda crackers that soon grow stale—stock your pantry with small *tight* packages containing

## Unneeded Biscuit

Fresh soda crackers every time you eat—the last as fresh as the first—because they are placed in moisture proof packages the moment they leave the oven.

5¢

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NATIONAL BISCUIT COMPANY

## Get a Watch and Fob Without Cost

**Boys:** Here is your chance to obtain a handsome and useful watch, and a fine leather fob with a gilt metal charm engraved with your own initial letter without cost. FARM AND FIRESIDE guarantees you satisfaction.

**DESCRIPTION:** This watch has a handsome nickel case, with open face. It is stem-wind and stem-set, just like other high-priced watches. It has a close-fitted snap back. It is only  $\frac{3}{8}$  inch in thickness. It is a perfect timekeeper, tested and regulated before leaving the factory. It is engraved front and back, and is a watch of which any one would be proud.

The Fob is of handsome genuine black leather with a polished buckle, like illustration, with a rich gilt charm engraved with your own initial.



**MOVEMENT:** Regular 16-size. Lantern pinion (smallest made). American lever escapement, polished spring. Weight, complete, with case, 3 ounces. Quick train, 240 beats to the minute. Short wind, runs 30 to 36 hours with one winding.

Every watch is fully guaranteed by the manufacturers and by FARM AND FIRESIDE.

The manufacturers will make all repairs for a year free, as explained on the guarantee.

## How to Get the Watch

We will send you this elegant watch and fob, without cost, if you get eight friends each to take FARM AND FIRESIDE for 8 months at the special price of 25 cents.

Just send us your name and address on a post-card or letter, to-day, and say that you want the watch. We will send you by return mail, without any cost to you, a book of 8 coupons, each one of which is good for a special eight-month subscription to FARM AND FIRESIDE. We will also send you a sample of FARM AND FIRESIDE. This outfit will help you a great deal in getting subscrip-

tions quickly. You sell the coupons to your relatives and friends at 25 cents each, send the eight names and \$2.00 to us and we will send you this grand watch by return mail. That is all you have to do, it is easy to sell coupons. Thousands of boys have done it, you can do it in half a day if you try.

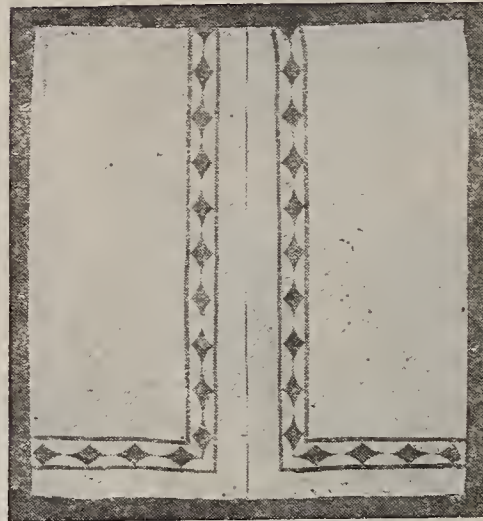
Write to us at once.

FARM AND FIRESIDE - Springfield, Ohio

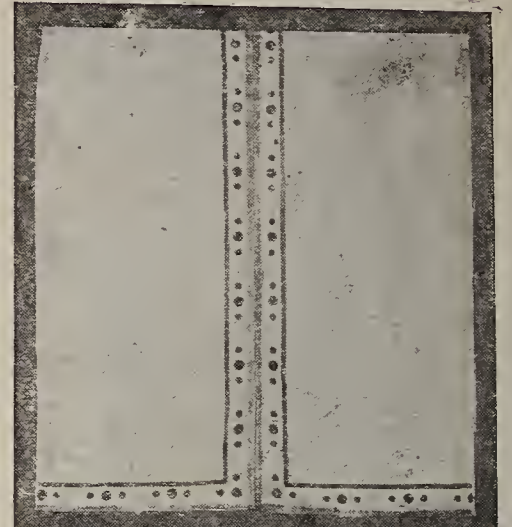
## Home-Made Curtains

### Simple Stencil Designs

By Margaret D. Chubb



No. 1—A border of dull green gives a cool effect to the curtain



No. 2—Dotted border of old rose on fine quality cheese-cloth



I THINK I take more pride in the curtains in my house than anything else. Somehow well-selected curtains add to the cleanliness and coziness of a room, even more than a highly-polished table or a soft, velvety rug. No one loves the good, warm sunshine better than I, but I must confess that I like to have curtains at my windows until the weather grows so unbearably hot and stifling that I am compelled to take them down. Before very long now it will be time for the usual spring house-cleaning, and it is then that every industrious housekeeper wants to make a few little changes in her home. This year I have made curtains for my whole house and stenciled them like the designs shown above. One feature about them that is most commendable is their cheapness, and then, too, they are very good looking and will launder and wear better than the troublesome lace affairs seen in so many homes. Such materials as cheese-cloth, thin unbleached muslin or lawn, although plain and unattractive in themselves, can be made wonderfully effective if decorated in some simple stencil work.

Stencil work has become very popular, but most of the patterns shown in magazines are most too difficult for the average woman to follow. The cut stencil patterns are very expensive and it is a hard matter to obtain satisfactory designs by mail. So I made up my mind to cut my own stencil patterns at home. Of course they are extremely simple, but, after all, simplicity is the key-note of beauty, and my little stenciled cheese-cloth curtains have been admired more than once. I cut my patterns with the aid of a few simple household articles. Perhaps this will sound appalling to the woman who cannot even draw a straight line, but in reality it is quite simple, as you shall soon learn.

The only materials necessary are paint (the regular oil variety ordinarily used for woodwork); a stencil-brush, if obtainable—if not, the regular "sash tool" used by painters for sash work; some strong, smooth wrapping-paper; pencil; yard-stick, and, most important, an ordinary two-pointed flatiron and some coins or button-molds.

The first design illustrated on this page is very effective and was developed on cheese-cloth. The material cost only six cents a yard, and twelve yards were sufficient for a tiny bay and one large window, making a total expense of only seventy-two cents. Surely very little outlay for an unusually attractive result.

To make the pattern for design No. 1, select a straight-edged piece of paper as long as the width of the curtain. In case this is not obtainable, a piece half the length or even less may be utilized, though this will, of course, necessitate repeating the figures as often as necessary to fill out the space and is a little more troublesome. Next rule a line across the paper four and one half inches from the long straight edge.

Place the points of the iron accurately on the line, and with a sharp pencil draw around the curved side furthest from the edge, from point to point, forming a row of scallops with the points just touching the line. Double the paper, folding it parallel to the ruled line and bringing the two long straight edges exactly together, and cut carefully around the scallops, making a tiny notch

in the exact center of the first scallops made. This will give two patterns exactly alike.

Have ready two more straight-edged strips of paper as long as convenient and your stencil pattern is complete.

You are now ready for the actual tinting.

Have the paint well mixed, keeping it about the consistency of cream, diluting, if necessary with turpentine. Cover a large table with felt or an old blanket. Cut your curtain the correct length, allowing, of course, for the hem, and spread smoothly on the table. Fold it diagonally by laying the bottom cut edge exactly on the selvage, making a perfect triangle. It is best to tint this folded bottom border first, as it will then be impossible to make any mistake in mitering the corner—the only difficult part.

Lay your scalloped pattern with the straight edge exactly on the cut edge of the curtain and notch in the first scallop exactly on the diagonal folded edge, place the other pattern just opposite and one eighth of an inch distant, forming the connected diamond-shaped openings shown in the illustration. Hold the pattern in place with irons. Rub the paint thoroughly into the brush and then wipe the brush until it seems almost clean.

A beginner is almost certain to use too much paint, which will be disastrous to good results. Brush firmly, applying the paint evenly in a light tone all the way across. Finish the curtains with an inch hem at both the side and bottom. The uniform hem carries out the border effect and is prettier on a curtain of this style than the usual wide bottom hem.

The other design is equally effective and is made in a similar manner. In fact, the same straight strips of paper may be used to form the straight bands.

For the pattern for the design in the center of the border, cut a straight-edge strip one and one half inches wide and six and one half inches long. Place in the exact center the large button-mold and draw a pencil line around it. Then on both sides of the large mold place the two small molds at distances as shown in the illustration. Also draw a pencil line around these and cut all the circles out with a sharp knife or shears.

The proportions of the border may be varied according to taste, but a good arrangement is to make the first band of color one and one quarter inches from the edge at the bottom and side, and three quarters of an inch in width, using the diagonal fold as a corner guide, as in the previous design. When this line has been tinted all the way up the side and across the bottom of the curtain, again begin your tinting at the diagonal fold by placing the center of the large dot on it. Tint and stick a pin at the end of the pattern as a guide for the next group and repeat all around. As a guide for your inside border line, make an occasional light pencil line at the edge of the center pattern. This will help you in getting both borders at equal distance from the dots. Make a hem a trifle wider than the tinted band, stitching exactly along the line of tinting.

These curtains will launder beautifully, but, of course, they should not be boiled, nor strong washing-fluids used in the wash-water. It is well to wash the curtains in warm water (not hot), using pure white soap. If care is exercised in laundering, the curtains will wear indefinitely and always look fresh and clean.





# THE HOUSEHOLD

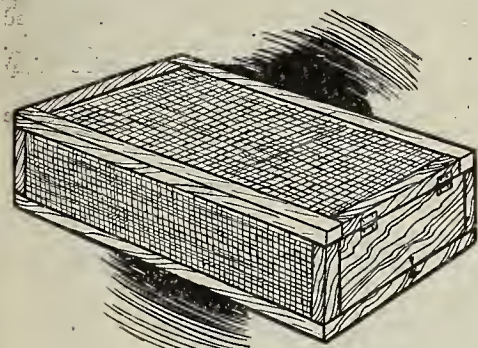


## Stuffed Eggs

CUT four hard-boiled eggs in halves crosswise, remove yolks, mash and add two tablespoonfuls of grated cheese, one teaspoonful of vinegar, one fourth of a teaspoonful of mustard, and salt and pepper to taste. Add enough melted butter to make mixture thick enough to shape. Make into balls the size of original yolks and refill whites, arrange on a serving-dish, pour over one half cupful of melted butter and reheat.

## To Renovate Feathers

HERE is a useful receptacle for renovating feathers. It is made of galvanized screen with the framework of



To Renovate Feathers

wood, also the ends. Hinges and a catch are fastened on one of the ends so that the box may be opened and closed. The box should be about a foot deep and as wide and long as your wash-boiler. Put in the feathers and fasten the end securely. Now fill your boiler half full of water and let it boil. On top of the boiler place the box containing the feathers; turn it occasionally from side to side so that all of the feathers will be equally steamed. When they are thoroughly steamed, put them in a clean sack and hang it on the clothes-line in the sun. This process will make the feathers as fresh and clean as when new.

## Kitchen Hints

The housekeeper who prides herself on her baking will be quite sure that the flour is kept in a dry, rather warm place. Light pastry, cakes and bread are quite impossible when damp, ice-cold flour is used in their making.

When mixing mustard for the table, use boiling water and a pinch of salt. This will prevent the mustard from drying and caking.

When making starch, while it is still hot drop into it a piece of alum about the size of a pea and stir until it is dissolved. This will prevent the starch sticking to the irons.

To prevent flannel shrinking and hardening, give it this treatment before it is made into garments: Put it while new into clear cold water and keep it in for a week or ten days, changing the water every alternate day. Then wash out the oily matter in warm soap-suds and dry it rapidly. It will keep soft and unshrunk unless very carelessly laundered.

Old kid gloves are usually discarded as worthless, but they make the best of all kettle-holders or iron-holders, the kid being so much poorer a conductor of heat than flannel or cloth. Square pieces of the gloves should be cut out and sewed together until the desired size is obtained, then covered with felt or flannel and the edge smoothly bound with braid or other convenient material.

To make very light delicate biscuit, rub half a pound of fresh butter into one pound of flour sifted with two teaspoonfuls of baking-powder and one half teaspoonful of salt. Mix it into a stiff paste with a little milk, roll out the dough, fold it over and roll out again. Fold and roll several times, the last time making it very thin and smooth. Cut it into plain or fancy shapes, place the biscuit on a baking-tin and bake to a light brown.

MARY, F. SNIDER.

## With Graham Flour

DELICATE GRAHAM BREAD FOR INVAILIDS—One pint of Graham flour, one pint of white flour, one teaspoonful of sugar, one teaspoonful of salt, two teaspoonfuls of baking-powder. Sift all well together, add one and one half pints of sweet milk and mix quickly into a smooth, soft dough. Bake in two small bread-pans for twenty-five minutes, protecting with paper for the first ten minutes.

GRAHAM ROLLS—Sift together one pint of Graham flour, one pint of white flour, one teaspoonful of salt, two teaspoonfuls of baking-powder, rub in one tablespoonful of butter and add one and one half cupfuls of sweet milk. Mix into a smooth dough, not too soft, mold slightly and form into small rolls. Lay them on a baking sheet so they will not touch, brush over with milk and bake in a hot oven for ten or twelve minutes.

GRAHAM PUFFS—One and one half pints of Graham flour, one teaspoonful of salt, two large teaspoonfuls of baking-powder, add two well-beaten eggs and one pint of sweet milk. Mix into a batter, half fill well-buttered cold gem-pans and bake in a hot oven for ten minutes.

GRAHAM CRACKERS—Mix one quart of Graham flour, one tablespoonful of sugar, one half teaspoonful each of salt and baking-powder, two tablespoonfuls of butter and a large cupful of sweet milk. Mix into a smooth dough and knead well for five minutes; roll out one fourth of an inch thick, cut in squares and bake in a rather hot oven for ten minutes. Watch carefully, as they burn easily.

GRAHAM MOLDS—To one pint of boiling water add salt to taste, then stir in Graham flour to make a thin mush; cook it well. Then pour out into cups that have been wet in cold water and set aside to cool. When cold, turn out upon saucers and serve with sugar and cream.

GRAHAM GINGERBREAD—One cupful of thick cream, one cupful of molasses, one teaspoonful of soda dissolved in a spoonful of warm water, one teaspoonful ginger sifted with the flour, a pinch of salt and add about equal parts of Graham and white flour, enough to make a rather stiff batter. Bake in a moderately hot oven.

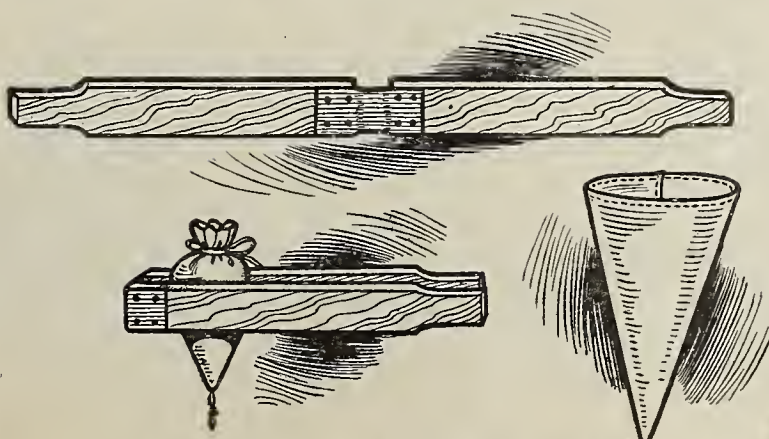
GRAHAM SPONGE-CAKE—One and one half cupfuls of sugar, three well-beaten eggs, one half cupful of cold water, two rounding cupfuls of Graham flour in which has been sifted two teaspoonfuls of baking-powder and one salt-spoonful of salt, flavor to taste. Beat hard for a few minutes, then bake in a quick oven.

GRAHAM COOKIES—One large cupful of sour cream, one cupful of sugar, one egg, one cupful of Graham flour, one half cupful of entire-wheat flour, one half teaspoonful of cloves, one teaspoonful of cinnamon, one teaspoonful of soda, one cupful of raisins. If milk is used instead of cream, add a little butter.

ELMA IONA LOCKE.

## Home-Made Lard-Press

TO MAKE the lard-press, illustrated below, take two boards about five inches wide, thirty inches long and of sufficient thickness and strength so that they will not bend. Dress down one end of each board until it is a convenient size to grasp with the hand. Then fasten the other ends together with a hinge or a piece of leather. The sack is shaped like a cornucopia, as shown below, and is made of strong new muslin. Dip the lard into the sack until it is nearly full. Draw the top of the sack together as shown in the illustration. One person holds the sack while another one catches it lightly near the top with the press. This lard-press is sure to prove a most convenient article.



Lard-Press Which is Extremely Easy to Make.

## Potato-Bug Exterminator

PLACE pieces of board or shingles here and there among the potato-vines and lay slices of raw potatoes on them. The bugs will go for them and can be gathered in a receptacle and destroyed, or you can use paris green or some other poison on the potato-slices and save the work of killing the bugs. A few days will serve to exterminate them.

## Garden Scarecrows

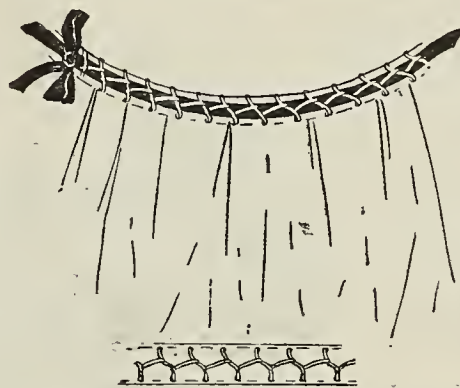
TO PREVENT birds from stealing seeds or destroying young growths in flower or garden beds, drive two stout stakes into the ground in bed, extending two or three feet above ground, and suspend a string containing paper fringe between them. The rustling noise will accomplish the work.

## Buttered Eggs

HEAT omelet-pan. Put in one tablespoonful of butter; when melted, slip in an egg and cook until the white is firm. Turn over once while cooking, add more butter as needed, using just enough to keep egg from sticking.

## Good Substitute for Beading

PLAIN fagoting makes one of the best substitutes for beading for underwear. Face the neck of the garment with a bias, and over this work a row of fagoting with embroidery-cotton (No. 25) the width of the ribbon to be used. The ribbon is run under the fagoting



stitches more easily than through beading. The fagoting lends a pretty finish and wears better than beading.

## To Utilize Cold Meat

VEAL WITH SMALL ONIONS—Thin slices of cold cooked veal, two cupfuls of hot milk, two tablespoonfuls of butter, two tablespoonfuls of flour, one half cupful of chopped celery, six small onions, one teaspoonful of salt, one salt-spoonful of white pepper.

Melt the butter in pan, stir in flour, add milk gradually. When smooth, add onions which have been parboiled and stew five minutes with cover on. Add the celery, slices of veal, salt and pepper. Cook five minutes more and serve.

SAUSAGE-ROLL—Sausage, butter, paprika, toast.

Slice sausage and fry quickly in butter, add chopped celery and paprika and serve on buttered toast.

## NEW EGG-BEATER



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# The Mysterious Envelope

[CONTINUED FROM PAGE 28]

## Chapter IV.

This morning he strode past the tables in the café with much the same air that distinguished M. Victor, the proprietor, and straight on into one of four curtained recesses provided by this same M. Victor for patrons desiring more privacy and seclusion than the café afforded.

The place was almost deserted when Scott Truesdell entered. He hurriedly scribbled an order on the pad which a waiter tendered, and as soon as he was alone, drew the curtains closely and produced the big envelope from his pocket.

For a second or two his hands trembled so, he experienced such a difficulty in breathing, that he merely sat and fumbled with it; but at last, gaining some measure of self-control, he contrived to abstract the contents and lay them on the cloth before him.

And what a sight greeted his bedazzled vision! There were exactly ninety-nine notes in the lot, all of one-thousand-dollar denomination, and all patently brand new, for they were without spot or crease. Including the note changed at the bank, he had in his possession just one hundred thousand dollars—and two cents! With a whimsical smile, he laid the two lowly little coppers beside the goodly pile of currency.

And, mystery of mysteries, how did he happen to have this prodigious sum?

What sane mortal, to begin with, would entrust a fortune to the mail with no greater safeguard than a two-cent stamp—and, moreover, address it to him through the general delivery? Who would send it to him?

He gulped and stared blankly at the bewitching pile. It was real; he was not dreaming.

He questioned himself until his brain fairly reeled; and the longer he continued with an inquisition that grew crazier and more distracted with each second, the farther away he seemed to drift from a possible solution. He managed, in the end, to settle down to a more or less—rather less than more—calm acceptance of the situation, and by the time he had returned the bills to his pocket and the waiter had appeared with his coffee and rolls, he had made up his mind to two details of the mysterious affair.

First, it was entirely out of the question that the money could have come from his uncle. By sacrificing everything he had in the world, it was extremely doubtful whether Seth Truesdell could have gathered together a tenth of the sum. But who in the world would be so woefully careless with one hundred thousand dollars? Every line of speculation brought him in the end to this *impasse*.

By whatever means the money might be accounted for, in itself at least it presented a concrete fact and Truesdell suffered no compunctions of conscience over using whatever portion of it he might need to meet his immediate necessities.

In any event, he was entitled to a good big reward for safeguarding the money and he fully meant to recompense himself on his own terms before surrendering the remainder. If, in the end, he should never find the owner, why, then, he would have no one to account to but himself.

At the conclusion of this satisfying line of reasoning, he turned to his breakfast with a zest that he had not known for weeks. His spirits were high, his appetite excellent. He was in the act of lifting the small coffee-pot, when the curtains were suddenly whipped apart and the girl of the post-office—the girl with the handsome gray eyes—was confronting him.

VERY deliberately Truesdell lowered the coffee-pot and frankly stared his amazement.

The girl's bosom rose and fell like a spent runner's; the gray eyes sparkled with some kindling emotion; but she was, as yet, giving him only scant attention.

She had instantly drawn the curtains behind her, and, fairly radiating excitement, she now stood in a strained attitude, holding them tightly together and listening, as if for sounds of pursuit.

Gradually, however, her tense pose relaxed; with the flexing of her muscles her tight grip on the curtains slowly loosened and in a moment or so her face dimpled, her saucy nose wrinkled in a smile and her lids lowered until she was regarding Truesdell through the fringe of her long dark lashes. The look was peculiarly tantalizing. How lovely the gray eyes really were came to him as a revelation.

"So they haven't caught you yet," she said at last. Her voice was rich and low, he was pleased at observing, and delightfully modulated—right in harmony with her trim, stylish little figure. "My! I can't see how you have the impudence to take such desperate chances. But it must be great fun."

The words were enigmatic; but Truesdell remembered to be polite. He sprang up and hastened around the table to draw back a chair.

"Sit down, please," he said easily, and when she accepted the proffered seat without the slightest demur, he returned to his own place.

"I'm afraid I am caught," he then said, with no attempt to hide his admiration. "And—well, yes; it is great fun."

Her head was a trifle sidewise, the back of one small gloved hand supporting her cheek, while the elbow rested on the table. With the tip of the other hand's forefinger she drew little patterns on the table-cloth, which served no other purpose than a place of refuge for her eyes when his look grew too ardent.

"That doesn't sound—like—Scott Truesdell," she said, her voice lowering.

He took a long breath and turned to the neglected coffee-pot.

"Could I induce you to join me?" he inquired, with an explanatory hand-wave above the table. "I can recommend Monsieur Victor's coffee; it is excellent. And the rolls—No?" as her ripe lips closed firmly and her dainty head shook an impatient negative.

"You saw the name on the envelope," he soberly asserted.

She nodded gaily and continued to look archly into his puzzled eyes.

As for Truesdell, he was mighty curious, of course, to learn what it was all about, but at the same time was resolved not to allow his curiosity to gain the upper hand. "You followed me?" he next asked.

Again she nodded and whispered: "Yes."

"Why?" The answer was a low gurgling laugh. "My!" exclaimed the girl. "How dreadfully unfortunate! Why not dispose of one thing at a time?" She grew abruptly thoughtful.

"I did indeed see the name on the envelope," she said. "That's why—after I had seen the money, too, I mean—I acted such an idiot. You see, I recognized it."

"The name or the money?" He was profoundly interested, but strove not to show it.

"Both," replied the girl.

"I had no idea," said he, in mock de-

preciation, "that the name was become so illustrious."

"Don't trifle," she warned. "It is well on the highroad to a good deal of notoriety, I'm afraid, unless you are very careful. Still—" She fell silent and once more thoughtful.

The hand dropped from her cheek and clasped the other on the table. She leaned closer to him, an intimate, confidential attitude that was distinctly pleasing to the mystified young man.

"Still," she said gravely, "I know you are not a thief. But—I am puzzled."

"No, I am not a thief," he returned, with a simplicity that brought a tender light to the gray eyes. "And if you are puzzled, why my dear young lady, what words will ever do justice to my own state of mind? Suppose we try to arrive at an understanding."

For a long time she surveyed him across the table. Her chin now rested on the clasped hands, and when she spoke to him presently there was just the slightest trace of pique in her voice.

"You have forgotten me—utterly."

"Impossible!" protested the young man. "Knowledge is a prerequisite of that species of mental deterioration known as forgetting; therefore, I use the word advisedly, impossible!"

"I suppose I have changed," she said a bit wistfully. Then a mischievous light glinted from her eyes.

"But, nevertheless, I mean to let you find out for yourself the angel you are entertaining unawares—"

"Angels need no names," he interrupted.

"Perhaps," she said, with a saucy up-tit of her chin, "they are all characterized by a monotonous similarity that makes one angel quite as acceptable as another?"

"You misunderstand me. All angels don't look alike to me. There is but one angel; the fact that she is nameless merely adds piquancy to an adventure which, alas! must end some time. Let us prolong it to the utmost; but before the inevitable finale you will surely, surely tell me. Angels, you know, are compassionate."

"There are angels—and angels," she reminded him, her eyes dancing.

"Meaning that you would have me believe you are in the latter category. Ha! I know better. Your heart will soften to my appeal—when the time comes."

Her head shook in firm contradiction.

"No. If you cannot guess, you shall never know. Once upon a time you were pretty good at guessing—Scotty. Isn't that what it used to be—before the freckles all disappeared?" Again the low musical laugh sounded pleasantly in his ears.

For a time she watched his effort at memory with quiet amusement. He stared at her unseeing. She knew that the familiar, well-nigh forgotten nickname had carried him back to the old Colton Academy days; and then she drew back somewhat shyly, as light began to overspread his perplexed countenance. It was a very handsome, manly countenance, by the way.

"Kitty Brandon!" he exclaimed at last in an awed whisper. "You!—that slim, homely, freckle-faced little tomboy!"

His astonishment and pleasure over the discovery carried him to his feet. All at once a peculiar expression appeared in his face, which filled the girl with something very like consternation.

"Kitty, there is one way to confirm your claim," he went on quietly. "Kitty Brandon would remember that a certain red-haired freckled kid used to be the bane of her existence; she would remember that he used to find an unholy joy in running

after her—and he had to sprint, too, if you want to know it—and when he caught her he would kiss her. Great Scott! how furious she would get; while he would dance around her and howl his delight like a young savage.

"If you are really Kitty Brandon—"

Before the girl could make a move to check or elude him, he had leaned down, caught her face between his palms and printed a kiss squarely upon her lips.

For a moment her cheeks flamed a rosy red; she was too overwhelmed at the audacity of the thing to speak or stir; and quite suddenly Truesdell was alarmed at the thought that his impulsiveness had led him into taking too great a liberty.

"Forgive me, Kitty," he began anxiously; "I—I should have known better."

Like a flash she was on her feet confronting him, her eyes blazing. In another flash his vision was illuminated with a galaxy of stars and his head rang under the impact of her gloved palm. He staggered back to his chair and eyed her ruefully.

"Yes," he admitted humbly, "you're Kitty Brandon, all right."

"And you," she retorted, "are the same cheeky Scott Truesdell."

"I—I—I beg your—" he faltered; but she stopped him with a stamp of her foot.

"Don't beg my pardon!" she furiously commanded. "I can't endure a man who does a thing deliberately and then is—sorry for it afterward. No!" in swift alarm, as he started toward her again. "Don't you dare!"

He halted.

"I am not sorry for myself, Kitty."

"Don't make it any worse, if you please." She dropped back into her chair. "Sit down." He obeyed meekly. "Now wait until I compose myself; then I want to talk to you—about the money."

"But—come, now—don't get to rag-chewin' over it," said a third voice that made them both violently start to their feet again.

## Chapter V.

DURING the brief tempest neither Truesdell nor Miss Brandon had observed that the curtains had again parted to admit a short, thick-set man, whose two predominant features were an enormous mustache and an apparent absence of neck.

Miss Brandon shrank close to the rear wall; while Truesdell, as soon as he recovered from his first shock of surprise at the apparently unwarranted intrusion, advanced upon the stranger menacingly.

"What do you mean?" he began threateningly.

But the girl intervened.

"Don't, Scott," she pleaded quickly. "I sha'n't say that this person is exactly welcome, but he comes with authority. I'm sorry we could not have had our understanding before this interruption, for the Lord knows things are sadly muddled."

"Well, I guess!" Truesdell emphatically agreed, looking perplexedly first at the girl and then at the new-comer.

"Explanations will come fast enough presently, I dare say," Miss Brandon went on, "but not in precisely the way we might have chosen." She turned sharply upon the thick-set man.

"Don't make a mistake, Mr. Officer," she said, with dignity. "The money is recovered—every cent of it—but you are a long way from laying hand upon the thief."

"Officer!" gasped Truesdell.

That individual bowed. "I'm it," said he. "James Sharp, from the central office."

He turned eagerly to the girl.

[CONCLUDED IN NEXT ISSUE]

# Easter Day in the World's Greatest City

[CONTINUED FROM PAGE 26]

conspicuous, the Four Million keep Easter gay with a wealth of color that makes the rainbow in comparison look like a pale trail of haze through the mists of evening.

The present-day parade is made up of any one who can afford to have a new dress or a new coat, a new suit or a new hat, or, failing that, those who are able to have last year's clothes scoured and pressed fresh from the cleaners.

So if you could have stood on the avenue, or on the cross-streets below Fourteenth Street last Easter Sunday and have witnessed the procession of gaily-attired clerks from the department-stores, the elaborately-clothed girls of the chorus, the attractively-arrayed cloak models, the gaudily bedecked waiters from the eating-places, the neat-appearing stenographers and the army of general shop workers plumed and togged out in all their glory and color, you could not doubt that the Easter parade is still with us.

And you would have seen others, too, hundreds and thousands of others, for whom there were no new dresses or suits or coats or hats, neither fresh-appearing clothes fresh from the cleaners—the wide-eyed, interest-absorbed watchers of the

parade. They were poor, the poor of all degrees, and you would have seen the expression of sadness on a face here and there; yet with all that it was Easter, with its Easter parade and its Easter gaiety.

The custom of walking home at Easter has been long established, and while the Fifth Avenuers who still remain in town during the Easter season continue to dismiss their coachmen and chauffeurs and walk to their homes, it is as much as anything to look upon their less fashionable neighbors, who have come also to see them.

The parade on Fifth Avenue is at its height at one P.M. and almost deserted at two o'clock, and later the promenaders are to be found on the drives, overlooking the Hudson—and their neighbor's dress.

The churches of the greater city, of which there are nearly one thousand three hundred, are decorated with mounds and banks of white roses and lilies, and on a bright, warm Easter Sunday they are packed and crowded with great throngs of people, both of the city and out of town, and generally there are thousands upon thousands turned away because they cannot be given either seats or standing room. Last year nearly four thousand people

witnessed the Trinity Easter service, while thousands, who were not able to squeeze through the doors, stood in the churchyard about the great edifice and packed the sidewalks of Broadway, listening to the great organs pealing forth their thunderous music.

St. Patrick's Cathedral is the one central point for the Catholic Easter celebration, and the pontifical mass is the one service of the day in which all the splendor of the Easter celebration is evident, making an impressive scene with its flower-crowned chancel, its candle-lighted altar, its gorgeous celebrants and hosts of worshippers.

When the congregations that attend St. Patrick's Cathedral and other churches in the Fifth Avenue district, including the Fifth Avenue Baptist, the Brick Presbyterian, St. Bartholomew's and St. Thomas are dismissed the Avenue is filled to overflowing almost solidly from side to side.

But there is a great church-building far up-town that will hold greater crowds and furnish the church-goer one of the most impressive Easter services of all the churches of New York City. Although the church proper is scarcely half completed, the first Easter service will be held

there this year, and it is planned to make the choir and musical service as elaborate as any held in the Greater City.

This great Cathedral of St. John, the Divine, will be one of the largest and finest in the world. Its architecture is monumental and massive. Its area will be one hundred thousand square feet, making it fourth in size in the world. In the great nave and crossings it will have a seating capacity alone of something like three thousand, aside from the spacious crypt and the seven chapels.

The corner stone was laid December 27, 1901, and it may require another twenty years to finish, since the work is carried forward only as contributions are made for that purpose. More than four millions have been expended in its construction to date and it may require twice as much more to complete. The main dome, one hundred and sixty feet high (shown to the left in picture) and the greatest in the world, has just been placed. The completed height of the cathedral will be four hundred and twenty-five feet. It will have a total length of five hundred and twenty feet, only a little more than half being now built.



For the Next 30 Days You Can Obtain FARM AND FIRESIDE'S Great Offers of

# Rose-Bushes

and Other Great Flower Collections

## The Five Best Roses

(Collection No. 101)

Every one a strong, healthy bush which will bloom the season of 1910. All are different. All are famous varieties as follows: Climbing Meteor, the brightest colored of all roses and a persistent bloomer; Mrs. Ben R. Cant, deep red and one of the hardest and finest varieties; Mlle. Franzisca Kruger, deep yellow—unique and distinct from all others; White Maman Cochet, snow white, tinged with the faintest suggestion of blush; Etiole de Lyon, one of the hardest and most beautiful yellow tea roses. See offers below and opposite.

## Five Fragrant Carnations

(Collection No. 103)

Every plant in this collection is a beauty. They will be shipped to you carefully packed, all ready for setting out. Here is a list of the plants: Prosperity, the largest carnation ever offered; Rose Pink Enchantress, one of the most famous varieties; Red Sport, the showiest variety of carnation ever grown; color a flaming scarlet; Harlowarden, a bright dazzling crimson—the largest and best of its color; Lady Bountiful, pure white, sweetly scented with old-fashioned clove fragrance. See offers below and opposite.

We Guarantee That These Flowers Will Bloom This Season of 1910

## Our Best Offer

Offer No. 1

**Farm and Fireside**  
Special eight-month subscription, 16 big numbers—the biggest and best farm paper—including gift of the publishers described on page 2. Your last chance to get the "Giant of the Farm Press" at these prices.

**Any One Collection of Flowers**

named on this page. Every flower collection has been specially grown for FARM AND FIRESIDE and will bloom this season of 1910. The greatest flower offers ever made.

If you want more than one collection add 15 cents for each additional collection wanted.

**This Offer Good for 30 Days Only!**

All Postpaid  
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If You Order Before  
April 25th

Carnation No. 103

## Another Big Offer

Offer No. 2

Get two people each to give you 25 cents for a special eight-month subscription to Farm and Fireside, send the 50 cents to Farm and Fireside, and we will send you any one Collection of Flowers without cost.

For three subscriptions at 25 cents each we will send you any two Collections of Flowers without cost. For four subscriptions at 25 cents each we will send three Collections of Flowers without cost.

Publishers gift described on page 2.

**Special Offer!** Every subscription sent to Farm and Fireside in connection with any offer on this page, will include the publishers gift described on page 2.

## Four Elegant Ferns

(Collection No. 104)

Of all plants for pot or interior decorations, ferns occupy the place of favor. You will receive, carefully packed, already for setting out or potting, four handseme ferns, all different, all well rooted, as follows: Boston, Emerald, Fountain and Asparagus. See offers above and opposite.

## Guarantee

All plants will be large, healthy and well rooted, and will bloom the coming season. We guarantee them to be exactly as described, to arrive in perfect condition and to give entire satisfaction or your money cheerfully refunded. Every flower collection will be sent carefully packed, with delivery charges prepaid by FARM AND FIRESIDE, and will be sent to any address you designate.

Ferns No. 104

Chrysanthemums No. 102

## Six Magnificent Chrysanthemums

(Collection No. 102)

This collection consists of six large-flowering Japanese varieties, all different colors, the very finest and largest chrysanthemums obtainable, as follows: Black Hawk, dark velvety crimson; Estelle, pure white; Millicent Richardson, beautiful rosy violet; Mrs. Robert Foerderer, soft creamy yellow with light amber shadings; Percy Plumridge, very large Japanese incurved variety of buttercup-yellow; W. F. McNeice, lavender pearl. See offers above and opposite.

## Cultural Directions

Collections must be ordered entire. Accompanying each lot of plants are full directions for planting, care, etc. Please state what month you prefer to have your plants sent to you.

Mrs. Ben R. Cant, Mlle. Franzisca Kruger, White Maman Cochet and Etiole de Lyon Roses

The Climbing Meteor—a Bower of Fragrance and Beauty

Send All Orders to FARM AND FIRESIDE, Springfield, Ohio





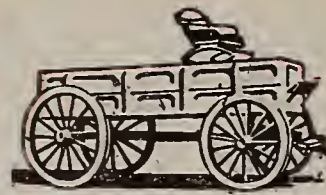
### Sherwin-Williams Paint (Prepared) S W P

is made of Pure White Lead, Pure Zinc and Pure Linseed Oil, with the necessary coloring pigments and driers. All combined in correct proportions with the aid of powerful machinery of our own special design. There is no better paint made than S. W. P. It will cover more surface, look better and last longer than cheap mixed paints or hand mixed lead and oil. Put up full U. S. Standard Measure.



### S-W Metalastic No. 2

A metal protective paint all ready to use. Is made of a combination of Graphite and other materials and Pure Linseed Oil, and has greater durability than many of the so-called graphite paints. It dries rapidly and gives a hard, impervious paint film that effectively protects the metal beneath. Just the paint to use on the metal parts of windmills, farm machinery, metal roofs, spoutings, iron fences and, in fact, on all metal surfaces exposed to the weather.



### S-W Wagon and Implement Paint

A durable oil gloss paint made especially to withstand hard usage. There is the greatest economy in keeping your wagons and implements well painted, to protect the wooden parts against dampness and cracking and the iron and steel parts against rust. It brushes out evenly, covers well and is very permanent in color. Your farm equipment will last twice as long if kept well painted and will give you better service all the time.



### S-W Brighten Up Finishes

Under this label we put up a complete line of paints, varnishes, stains and enamels for every use or surface in and around the home. Not one product for all purposes, but a number of different products, each one made especially for a particular purpose and the best for its purpose. Tell your local S-W Agent what you want to finish and he'll give you a Brighten Up Finish that will do the work well.



# SHERWIN-WILLIAMS

## PAINTS & VARNISHES FOR USE ON THE FARM



### S-W Commonwealth Barn Red

A bright, handsome red for painting barns, outbuildings, fences, corn cribs, etc. It works freely under the brush, has great covering capacity and wears well. Is put up full U. S. Standard Measure, and so is more economical than the many short measure, poor quality barn paints sold at a low price.

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In Canada to  
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### S-W Buggy Paint

will make your old buggy look like new. This is a Varnish Gloss Paint made to stand wear and tear and outside exposure. It colors and varnishes at one operation and vehicles finished with it can be washed without injuring the gloss or durability of the paint. S-W Buggy Paint is a high quality product and should not be confused with the many cheap mixtures on the market. Comes in full measure cans; nine handsome colors.



### S-W Creosote Paint

is a moderate priced paint, just the paint for painting farm buildings, outhouses, fences, bridges, etc., in fact for protecting all kinds of rough wooden structures from the wear and tear of the weather. It is of splendid quality, spreads easily under the brush and wears well. It contains Creosote, which prevents the decay of the wood and has a very sanitary effect in buildings where poultry, horses and stock are kept.



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